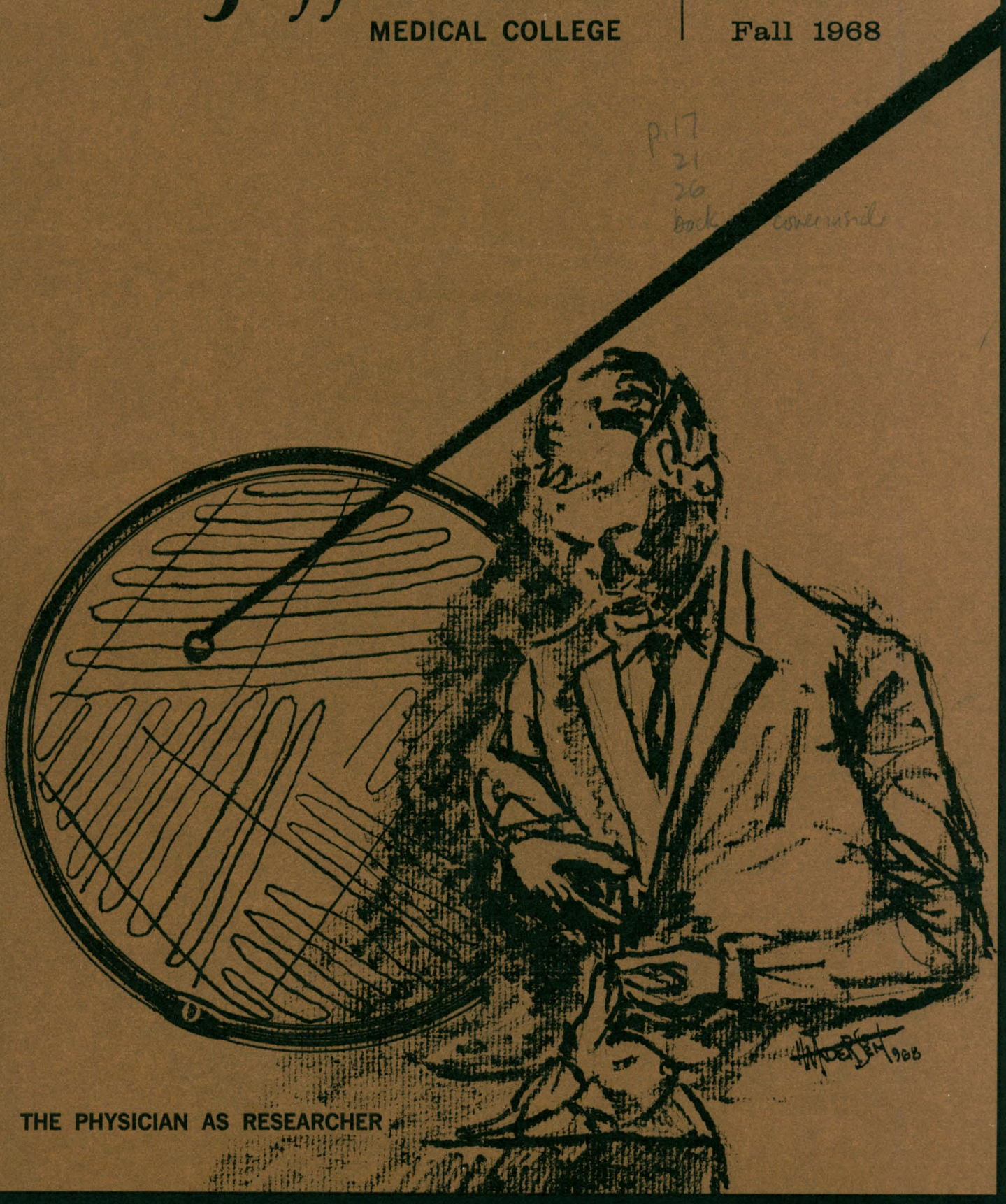
Fall 1968

Jefferson Alumni Bulletin – Volume XVIII, Number 1 Fall 1968

Jefferson
MEDICAL COLLEGE

ALUMNI
BULLETIN

Fall 1968



THE PHYSICIAN AS RESEARCHER

November 13
Connecticut Chapter, Dinner Meeting

November 14
Puerto Rico Chapter, Dinner Meeting

November 19
Boston Area Alumni, Dinner Meeting

Open House, New Orleans, in conjunction with the meetings of the Southern Medical Society

December 2
Open House, Bal Harbour, Florida, in conjunction with the Clinical Meetings of the American Medical Association

February 27
Alumni Association Annual Business Meeting and Dinner, Jefferson Hall

March 13
Fathers' Day Program for sophomore students

March 17
Convocation and Dedication of Jefferson Hall

IN THIS ISSUE:

The fall issue introduces two new ALUMNI BULLETIN series. The first of these will span several issues with articles by alumni on the physician in his various roles in today's society. Dr. Karl Habel '33, makes the first presentation. His subject: "The Physician as Researcher." For the past year Dr. Habel has been associated with the Scripps Clinic and Research Foundation in LaJolla, California. Prior to this he spent thirty years in the Public Health Service, retiring as Chief of the National Institute of Allergy and Infectious Diseases Laboratory of Biology of Viruses. The second series will be a regular feature entitled "Profiles," in which well known Jefferson personalities will be interviewed. "Progress at the Interface" provides some background on The Franklin Institute, one of Jefferson's most recent affiliates, and reports on developments in their joint exploration of the interface of medicine and technology.

Credits: Cover, Harry W. Andersen, Jr.; Design Consultant, Lou Day; Photography, pages 14-20, 22, Charles F. Sibre.

Jefferson MEDICAL COLLEGE ALUMNI BULLETIN

Fall 1968

VOLUME XVIII, Number I

Page

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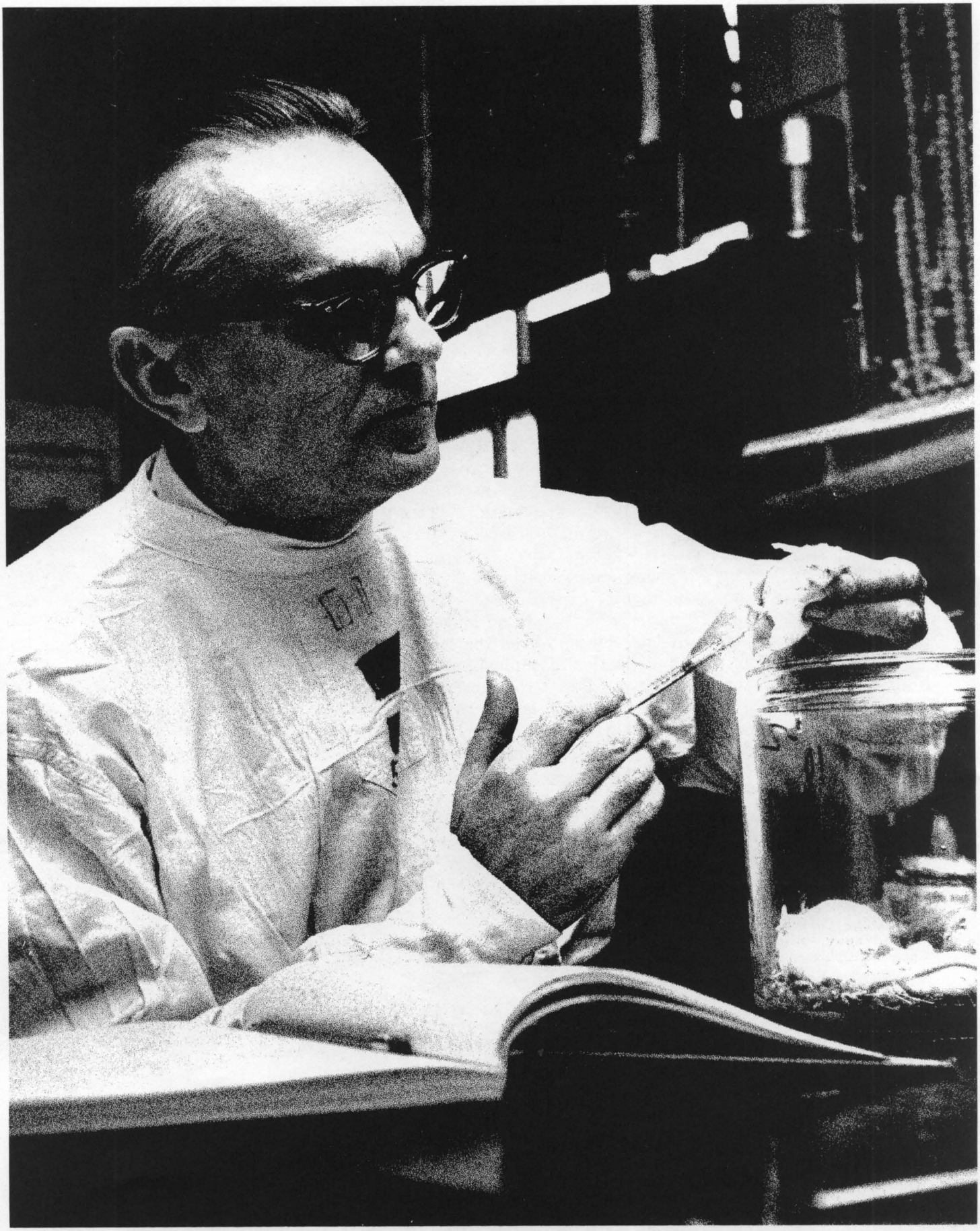
Published four times a year, Fall, Winter, Spring, Summer
Second Class Postage Paid at Philadelphia, Pa.
The Alumni Association of Jefferson Medical College
1025 Walnut Street, Philadelphia, Pennsylvania 19107



Dr. Habel

The Physician as Researcher

by Karl Habel '33

Every practicing physician who is doing a good job is a researcher! If research is a "studious critical inquiry," what could better describe the approach of today's scientific practitioner to the clinical problem of his patient. However, the researcher I shall discuss in this article is "one who purposely devotes his time and energy to the discovery and development of facts through investigation and experimentation with the aim of uncovering new knowledge, or of revising accepted conclusions."

Although most people think of the physician-researcher as being involved in so-called "clinical research," actually the spectrum of scientific activity open to the medically-trained person is very broad. This is not surprising since the areas of the scientific disciplines to which the medical student is exposed during his undergraduate and medical education is correspondingly diverse. The spark of interest may be kindled to enthusiastic lifelong dedication at any of the multiple steps and levels of this exposure. Furthermore, the previous sharp distinction in the level of scientific sophistication involved in clinical research on one hand, and basic laboratory biological research on the other, is no longer so sharp since today's clinicians must use the concepts and even the tools of the basic scientist. This increase in the sophistication of clinical practice as well as of clinical research is not merely a reflection of the increased efficiency of scientific communication between the research lab and the clinician, although this has been a factor. It is probably chiefly due to two facts: first, the increasing breadth and especially depth of training in the basic sciences required of the medical school applicant; and second, the marked, almost exponential rise in the amount of basic science research being done in our universities and medical schools starting shortly after World War II. Because of these facts plus other factors such as the medical specialty boards' recognition of time spent in research training, physicians in the specialty areas doing clinical research are already thinking in basic terms and applying "the scientific method" in their investigations.

In spite of this improvement, one has only to scan the clinical medicine literature (including the brochures and reprints supplied by the commercial drug houses) to see that in many instances the critical analysis applied to clinical research findings leaves much to be desired. By this statement I am not implying that all publications in basic research are adequate—far from it! However, in general, inadequate critical evaluation and the drawing of unjustified conclusions seems to be a limitation more often applicable to research at the clinical level. There are many reasons why this is so, some of which are built in, so to speak, in the very nature of the situation in which much clinical research is done. One of the chief reasons is statistical. There are stringent limitations on the number of specific clinical entities that can be studied by a single researcher in a few institutions during a given period of time and most of the patients involved are not directly under his control. Furthermore, the availability and method of

selection of adequate controls has always been a difficult problem. Double-blind studies, where the person applying a diagnostic technique or therapeutic procedure is not the same one to evaluate the results, and the identity of experimental vs. control subject is unknown to both, are difficult to set up under the best circumstances. They usually require the collaborative effort of a group of investigators and are costly. The increasing awareness on the part of the public, the profession, and both private scientific and governmental regulatory groups concerning the moral obligations inherent in research involving human subjects has emphasized another important limitation in clinical research. Under what conditions is a clinical study justified—especially if it involves a deviation from present standard procedure which is true in most cases? Here again a group effort is required since the responsibility for establishing the justification for any research proposal involving human subjects must be shared by a number of competent colleagues, or peers.

One of the important sources of poor quality clinical research has been the reliance upon subjective evaluation of results. This is becoming less true with increased sophistication of instrumentation and the development of quantitative procedures coupled with statistically better experimental design. However, in my opinion, this continues to be one of the major weaknesses of clinical research.

In spite of these drawbacks in the clinical research area today, there are obviously more and better investigations aimed at solving practical clinical problems than at any time in the history of medicine. The increased availability of research funds—chiefly from federal governmental sources—has made it possible for the establishment of clinical facilities specifically designed for research patients. A physician today can spend full time in research without the necessity of his family making sacrifices in their standard of living because of inadequate income. Not only are fellowships available for the purpose, but young physicians interested in academic or investigative medicine are encouraged to spend several years in a basic laboratory research environment in preparation for later clinical research. This has been the fundamental purpose of the Research Associate program at the National Institutes of Health where the cream of the crop of young graduates can get such training while fulfilling their military service obligation. This has not always been so easy, as I discovered very early in my career. After five years of internship and residency training in pediatrics and infectious diseases, I was fortunate to have had enough research exposure at the clinical level that I knew this was the area for me. In an attempt to find a position where I could be completely devoted to medical research I applied for a fellowship at the Rockefeller Institute in New York City (one of the few in the country at that time). I received prompt reply saying that they would be glad to have me as a Fellow the following year. As sort of an afterthought the letter ended with, "Of course you understand that the salary available is $600 a year"! With a wife and one child this seemed inadequate even in the depression year of 1938. I subsequently arranged to take the examinations for a commission in the U. S. Public Health Service which I obtained and asked for assignment to the National Institutes of Health, the Service's research branch. I was so assigned and remained there in research for twenty-nine years. The starting salary there was terrific—$3,200 a year!

The recognized need for the continuing use of fundamental techniques on clinical materials can now be met through grant funds available for support in depth of the research labs associated with clinical research pro-

grams. Such clinical research facilities have been established in a number of medical centers* with federal funds designated specifically for that purpose. In contrast to the increasing restrictions limiting the use of human subjects for research purposes, the ability of the clinical investigator to get answers directly applicable to man has been helped tremendously by the advent of tissue culture techniques where human cells and organs can be manipulated *in vitro* for direct experimentation. For example, in my own field of current interest, the tumor-inducing viruses, it is obviously impossible to fulfill Koch's postulates when we have a virus which is a candidate for being a cause of human tumors. Even though we cannot inoculate the virus into newborn humans and observe them for a lifetime for the development of a particular type of tumor we can inoculate human cells in culture. These cells can be observed for evidence of their transformation from normal to cells having tumor properties and they can be used in certain types of *in vitro* tests for the purpose of examining human tumors and tumor patients' serums.

The development of the Regional Primate Centers where relatively scarce and expensive subhuman primate species are available for collaborative studies now is also having an important impact upon human medical research. Through national and international epidemiological studies, answers impossible to obtain directly from individual patients may be revealed by mass population data coming from naturally occurring experimental systems.

Prior to World War II most of the departments of basic sciences in medical schools were headed by M.D.'s and most basic medical research in this country was conducted by medically-trained scientists. This is no longer true yet there are still many examples where medical graduates are on the forefront of developments in the rapidly expanding fields of such basic sciences as biochemistry, molecular biology and genetics. In fact, there are now many more incentives to influence the medical graduate to turn his energies into these fundamental fields. First of all he is exposed to the excitement in these burgeoning fields and even participates in that excitement as an undergraduate, in medical school as a student or as an assistant in summers, or during elective periods. To meet this type of interest on the part of the prospective medical student some universities now offer their medical applicants a combined Ph.D.-M.D. program where more time is spent in the basic sciences. Postdoctoral fellowships in research labs have made it possible for the M.D. to pursue very high quality fundamental biological research full time for a year or two before or after qualifying for his clinical specialty boards. As a result of this wonderful trend to a mixing of the basic with the clinical, more and more physicians in academic medicine are getting dual appointments in basic science and clinical departments. Of course this brings up a question which is asked frequently by young medical graduates who are considering a research career but still wish to be involved in clinical medicine. "Can I do basic laboratory research and keep my clinical contacts by seeing patients and making rounds?" This is not easy to answer; certainly it depends on the individual situation and the person involved. The degree of participation in each type of activity is obviously an important item. One must be realistic in admitting that it is an extremely rare individual who can squeeze two complete careers into the hours available for one, and in most cases where it is attempted one or the other, or sometimes both, suffer.

* *Jefferson opened its Clinical Research Center in 1964. The facility is directed by Dr. O. Dhodanand Kowlessar and was the subject of a feature article in the spring 1968 ALUMNI BULLETIN.*

This is especially true if the two types of work have relatively little scientific relationship to each other. The more ready availability of technicians, professional assistants and automated instrumentation has helped in providing the extra time required, and by being selective in where their energies are directed, many doctors are able to maintain the dual role successfully. We have many good examples of how difficult this can be sometimes since this is the usual arrangement for our research colleagues in the underdeveloped countries of the world, where in order to make a decent income the laboratory research man must carry on a practice at the same time. Rarely is such a situation the source of good research.

The modern practice of medicine requires that the clinician also be a practicing scientist in the true sense of that term. Specific diagnosis of metabolic disorders, for instance, must of necessity consider specific biochemical reactions and products and their rational treatment requires a knowledge of pharmacology at the biochemical level. The recently publicized activities of the Food and Drug Administration again remind us of what we have known for a long time—there is no solid, experimental, scientific basis for many of the standard, even classical, therapeutic procedures used by all of us. Advertising pamphlets of commercial drug houses are not the best source of scientific information and subjective evaluation of uncontrolled studies in the past is no basis for therapeutic efficacy. This need for a scientific basis of fact of course applies to all areas of medicine. I think the currently popular field of organ transplantation is a good example of such a need where the development of the surgical techniques has outstripped the ability of the medical team to evaluate and manipulate the fundamental immunological factors which ultimately catch up with the patient who has received the transplant.

In the early part of my career in research one considered himself very lucky if he had a lab room all to himself and a technician-helper on a full-time basis. Laboratory medical research tended to be chiefly an individual effort. If a certain technique was important in solving your research problem, you learned how to do it yourself; and if it required expensive equipment—and by "expensive" we meant over $50—you usually didn't do it. The time factor was not so important in those days. If you were able to publish one solid research paper every couple of years you were ahead of the game. Now the pace has quickened. Few research projects are carried as individual efforts since the "team approach" has taken over. Every scientist expects to have several technicians, unlimited budget for equipment, and feels that he has to publish a paper every couple of months or he will lose his standing in the field. This is true not only for the well-established scientist, but also frequently for those just starting. Obviously not all researchers today work in such an ideal situation, otherwise the field would be overcrowded. However, work conditions for the research medical scientist today certainly are much improved and rightly so. It does not make good economic sense to have an expensively trained research scientist spending his time doing procedures that can be done as well, or frequently better, by a good technician. Automation, although initially expensive, frees the lab for more sophisticated experimentation. As the tempo and the quality of medical research effort increase, the degree of sophistication in the character of the research pursued is likewise greater. It is obvious that important practical medical problems are complex, multifactored situations and any serious attempt at their solution must involve multiple types of investigation. Hence the need for team effort where a

variety of scientific disciplines can be focused on one main goal. This is one lesson we have learned from industry and from research in non-medical fields.

The question of the nature of the research being done in the medical sciences has been raised even at the federal cabinet level by President Johnson. There has been a growing realization that all the wonderful research findings we read about in scientific publications as well as in the daily press, somehow get diluted or completely lost in making the trip from the lab bench to the patient's bedside. This is not just a problem of communication; in fact, it is more a matter of a lack of effort and even of imagination of clinically oriented research. Here, as compared to basic biology, is the place where the M.D. with a background of knowledge and experience in basic disciplines can make the greatest research contribution. Call it "applied research" or "practical research" or any other name—these do not detract from its importance. Personally, I think "developmental research" might be a better term if it must be called something. Here an example might be human genetics and congenital metabolic defects. The uncovering of the genic origin of certain long-known metabolic diseases and the influence of human genetic factors on their occurrence and clinical manifestation, need to be exploited further by solid clinical research. The facts already established have opened up a whole new area of responsibility for the practicing physician—genetic counseling.

Now one of the facts of medical research life—and it has certainly been true in my own case—is that the longer you work at it the more basic your approach tends to become. In my own field of medical virology my early interest in attempting to discover a new virus or to produce a new vaccine to prevent a virus disease soon raised basic questions of how does a virus replicate itself at the level of the single cell and what determines the outcome of the virus infection at the whole animal level? Biological "phenomena" are common in most research labs and any intelligent scientist working consistently in almost any area of biology is bound to discover new ones. This is very self-satisfying and the finding frequently is important, but determining how and why that phenomenon is happening, what are its implications in nature and medical science, and how can it be used to advantage, represents the ultimate in achievement to the basic scientist. So, my interest in biological factors of virus infection started to include biochemical factors. Later I found myself thinking of such intriguing questions as what is the origin of viruses, what essential role might they play in human ecology, can they be used to produce desired biological changes? And so it goes and the medical researcher finds himself a long way from the developmental problems with which he first started.

To some, and this includes many of my colleagues in practice, basic medical research is an unnecessary luxury or even a waste of time, money and effort, especially for an M.D. Yet, these same individuals will agree to the importance of applied or developmental medical research. They forget or rather ignore the fact that the developmental researcher needs something to develop and that the very rare, totally new concepts in medicine have usually been born at the basic research level. In the last twenty-five years we have had continuously increasing experimental evidence presented to us that biological, biochemical, metabolic and genetic events occurring in lower living forms such as the bacteria, have their counterparts in animal cells, in human cells and in the whole man. These are not only counterparts, but in most instances represent identical biochemical

entities and reactions. So for someone to study in depth, for instance, the enzyme systems operative in the replication of the genome of some saprophytic bacterium is not so esoteric as it might seem, since it may have implications for replication of the mammalian cell genome and, therefore, have significance in human genetics, cancer, tissue repair, etc.

We hear a great deal of discussion these days deploring the fact that medical school faculties are so busy with their own personal research work that they don't have time to teach medical students. There is no doubt that in some departments in some schools this is a true description of the current situation and because of this lack of balance the importance of research in a medical student's training may be downgraded. However, there is no substitute for intimate association if not actual participation in a research project for developing the scientific attitude required in all aspects of the medical profession. And this is just as true for the professor as it is for the student! Furthermore, the closer the basic research people are to the clinical researchers and teachers, the better, both in physical juxtaposition as well as in scientific communication.

There is a prevalent notion on the part of the medical profession as well as the public that medical research can be pursued successfully only in a big university medical school or research institute complex. In general, this was true prior to World War II when the number of research positions available was very limited. Chiefly as a result of federal financial support in matching funds for research buildings, for training fellowships and research project grants, this limitation of research opportunity no longer exists. Excellent and very sophisticated medical research is now being done in dozens of small research institutions, in non-medical-school-affiliated hospitals of all sizes and in all types of organizations. The wherewithal to maintain all this research effort is not completely derived from federal funds. The importance of the contribution that even basic research can make to the overall medical scene has been recognized with the frequent inclusion of a research item in operating budgets coming from local funds. Furthermore, there are now many disease-oriented foundations which are very efficient at collecting contributions from the public to be used in support of research at all levels.

Finally, let us consider what are the attractions of a research career and what sort of individual is likely to succeed in it. Obviously the research man must have an inquiring mind. He must question the basis of all dogma and be not only willing but enthusiastically eager to dig out the answers. He should have a fundamental logic in his approach to problems and evaluation of situations. One of the most important aspects of research is asking the proper questions from experiment to experiment to be sure that if and when an answer is obtained it will have significant meaning to the overall problem being pursued. Equanimity and persistence are essential to prevent frustration and self-denigration, and, of course, there is imagination. However, imagination as such is not enough; it must be accompanied by an attitude which derives pleasure from the use of it. And here is the greatest attraction of a research career—to spend every day doing things that you yourself have planned, pursuing your own ideas and being successful at it in the critical eyes of your colleagues in the field. To be doing work you enjoy, to look forward to each day with anticipation and enthusiasm, this is the reward more readily available to the research man than to most.

Medicine and Technology
Progress at the Interface

by Elinor Bonner

Collaboration between Jefferson and Franklin has been history for two hundred years now. Of course, the original collaborators were a Jefferson and Franklin of a different nature—Thomas Jefferson and Benjamin Franklin. The scene of the collaboration was Philadelphia, the year, 1775, and the event, the Second Continental Congress—a combination of ideas and personalities which yielded the formula for a new political state, uniquely successful in the history of government. A document which heralded the founding of the new nation became as renowned as the nation itself. The Declaration of Independence, it was called, and it emerged from the committee work of individuals including Benjamin Franklin, to undergo final authorship by Thomas Jefferson.

The Jefferson-Franklin affiliation of today is as innovative a move as was the political structure formulated two centuries ago. It is also as promising. The collaborators of this era are, of course, The Jefferson Medical College of Philadelphia and The Franklin Institute of the State of Pennsylvania for the Promotion of the Mechanic Arts. Each has a special competence, Jefferson in the life sciences and Franklin in the physical sciences, which opens to the combination a leadership position in the rapidly burgeoning hybrid discipline known as biomedical engineering. Prospects indicate an explosion ahead for the new specialty. One research magazine quoted opinion that, "it may rapidly become the nation's biggest business, bigger even than aerospace." And with the increased interest and development in the field, Congress has opened its purse to the cause, assuring its growth.

Jefferson and Franklin move into the action early and with unique advantages. Advantages which include one hundred forty-five years in science (both were founded in 1824), and the most complementary of talents. Franklin has conducted research and development activity since 1946 in its Research Laboratories and, since 1922, at the Bartol Research Foundation. In the Philadelphia community, though, Franklin is as easily associated with education as with research—a reputation acquired through its Science Teaching Museum and Fels Planetarium. Jefferson, in its one hundred forty-five years, has educated more physicians than any other private medical college in the nation. The graduate program was started in 1949. Jefferson actually has had a university charter and the ability to grant degrees since 1838, however. On February 27, 1968, the fusion of disciplines became official with ceremonies held in Franklin Memorial Hall in the Franklin Institute, where the heroic statute of Benjamin Franklin surveys the scene. The affiliation creates a new science resource with capabilities for advanced medical and scientific research. The agreement calls for the pooling of laboratories, personnel, instruments and equipment of both institutions. The broader base which the interaction provides applies not only to research, but also to education, particularly graduate education. Master's and doctorate degrees earned under the affiliation program will be awarded by Jefferson. In many cases, the course work will be done principally with Franklin personnel and equipment.

The affiliation is one of the first attempts to span the communications gap between medical scientist and physical scientist. Jefferson's associate in doing so is an institution of many faces. The Franklin Institute is a child's wonderland of science for fun—where he can walk through a human heart in replica, observe the laws of physics and chemistry under demonstration is eye-opening and in one case, hair-raising, experiments, and have his curiosity titillated by a seemingly endless unfolding of science. Franklin Institute at the same time researches the technical questions of the nuclear age, as its Bartol Research Foundation in Swarthmore, Pennsylvania, concentrates on basic nuclear physics and cosmic radiation. Franklin Institute is yet the public servant, performing diversified contract research for government and industry in its Research Laboratories, staffed by three hundred scientists and engineers. At another turn, Franklin Institute is a gateway to the stars. The planets, the moon and beyond come into view against a steel dome background, on a journey through

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Mrs. Bonner joined the Alumni Office staff following her 1966 graduation from Drexel Institute of Technology. She is Assistant Editor of the Alumni Bulletin.


IN HONOR OF BENJAMIN FRANKLIN

space via the Fels Planetarium. Franklin Institute in a final face is one of the most complete scientific libraries in the nation, stacking some quarter of a million volumes, in addition to its extensive periodical and patent collections. Will the real Franklin Institute please stand out? It does. In all categories.

The Franklin Institute has come a long way from its 1824 days when it served as an information exchange ground for three hundred highly motivated, if not highly educated, members. In those days Franklin and Jefferson were even closer neighbors. Franklin opened its doors in 1824 at Seventh Street off Chestnut, in a building which now houses the Atwater Kent Museum of Philadelphia. A few months later and a few blocks away, Jefferson established itself at Fifth Street and Prune, now Locust, in the old Tivoli Theater. Eventually, Jefferson moved uptown and Franklin moved too, uptown and north a little. Today Franklin Institute comprises three buildings. The block long ediface at Twentieth Street and Benjamin Franklin Parkway is the main building, dedicated in 1932. It houses the Science Teaching Museum and the Fels Planetarium. The large modern Research Laboratories building went up adjacent to this in 1966. The Bartol Research Foundation in the suburb of Swarthmore was established through a bequest of Henry W. Bartol. While Franklin has outgrown its original structure, it has retained its original functions. These are science teaching, research in the physical sciences, dissemination of scientific information and recognition of scientific achievement.

The Science Teaching Museum is the public face of the Institute. Last year 609,432 people visited its facilities, which include the noted Fels Planetarium. Seventy-three percent of these visitors were children. The Museum is the principal vehicle of Franklin's educational programs. It attracts the mind in its formative years, flashing before it demonstrations and exhibits that make exciting subjects of such natural phenomena as electricity, magnetism, light and color, and energy. "Lighting the spark of science in young minds" is how the Institute refers to these programs. "How?" and "Why?" are questions the Franklin Institute attempts to answer for all age groups, however. Its educational programs for the general public include lectures, workshops and special exhibits. Lectures cover a broad range of scientific subjects and are given by authorities in the field. A particularly popular feature of the Institute is its Fels Planetarium. Under the direction of Dr. I. M. Levitt, the Planetarium was the gift of the late Samuel S. Fels and was opened in 1933. A multiple stereoptician projector brings all the stars, past and present, into a cloudless, if artificial, sky. Last year 327,939 persons attended a total of 1,157 lectures, which covered such topical subjects as, "The Moon—Springboard for Tomorrow," and "First Ten Years in Space." Last year also, at the request of the School District of Philadelphia, Fels gave special astronomy enrichment programs to nearly four hundred students during the fall and summer.

The Institute's educational facilities and programs are so extensive that their operational cost, for one day, is five thousand dollars—visitors or none. The Museum programs bring in approximately half the Institute's revenue from educational activities. Income from government appropriations, endowment funds and gifts accounts for the remainder of the $1,231,000 figure.

Dissemination of scientific information on a more technical level is the work of the Franklin Institute Library. In addition to stacking 250,000 volumes, it receives more than 3,500 periodicals. Two thirds of the subscriptions on the computer list of periodicals compiled annually have foreign titles. Many of these are rare in United States libraries, but important to science and technology. The Library has all United States patents and a great many foreign patents. Its reputation, like its collection, is international. Another information channel is the *Journal of the Franklin Institute*. It is the oldest scientific journal in the United States in continuous publication. At age one hundred forty-two, the *Journal* draws readership from sixty nations. Leading scientists from throughout the world contribute papers covering all branches of the physical and composite sciences. The magazine will be expanded in scope through the Jefferson affiliation to include biomedical engineering data.

Teaching, dissemination—and recognition. The latter is equally important in the history of the Institute as the first two. Franklin established the first of its medals and certificates for outstanding achievement in 1848. This was the Elliott Cresson Medal. One hundred twenty-two years later, Franklin made eight prestigious awards in a single year. The highest honor, the Franklin Medal, last year went to Dr. Murray Gell-Mann, Professor of Theoretical Physics at the California Institute of Technology. Dr. Gell-Mann introduced the concept of "strangeness" and discovered the "eightfold way." The other award recipients worked in the areas of remote manipulation, neutron diffraction, prefabricated housing, powder metallurgy, semiconductor controlled rectifiers, and systems engineering and communications for aerospace projects. The award recipients are selected and recommended from the fields of science and engineering by a sixty-five member Committee on Science and the Arts.

While the Science Teaching Museum occupies the stage, the Franklin Institute Research Laboratories works behind the scenes. This does not imply obscurity. Hardly, when the Research Laboratories is the largest independent research facility in Pennsylvania. This and the Bartol division in Swarthmore are the two centers of research at The Franklin Institute. The Laboratories building is a new five million dollar, 150,000-square-foot facility. A private service organization, it is interested in finding scientific solutions to problems and in developing useful technology. To this end it employs three hundred full-time scientists and engineers to handle an annual six million dollars in contracts. While government and industry are the largest consumers of its resources, the Laboratories also conducts self-sponsored applied research. Last year eighteen new self-sponsored projects were started, some of them in biomedical engineering. Because Franklin is a non-profit corporation, all income from research activities is returned to the support of these activities. Dr. Joseph R. Feldmeier, Vice President and Director of Laboratories, oversees the range of activity extending from basic research to product development. Biomedical engineering is included in this spectrum in increasing measure. Melvin B. Zisfein, Associate Director of the Research Laboratories, talked about some of these projects, preferring to call the discipline, "the interface between medicine and technology," because of its broader definition. One project is an investigation of the structure and properties of the human bone. The study aims at devising protection from collision impact for occupants of vehicles. Another effort underway last year was an emergency medical care system. This explored what happens on the highway in a rural area after an accident or medical emergency, including factors such as detection of accident situations, dispatching of emergency systems, the physical concepts of emergency systems and the training of vehicle personnel. The project resulted in submission of plans for both urban and rural systems of emergency care to the Department of Transportation.

Dr. Peter S. Francis, Technical Director of the Chemistry Department of the Research Laboratories, spoke of some further studies involving both engineering and medical input. Work is underway on a National Institutes of Health contract with another Philadelphia medical college and hospital, attempting to find a method of treating plastic that will prevent blood from clotting upon contact. "We hope someday it will be as compatible as the tissues of the human body," Dr. Francis offered. Franklin in the past has done work on an artificial kidney machine. And starting soon will be research on improving methods by which blood can be taken from the body for artificial kidney dialysis. This project is in conjunction with two local medical colleges and hospitals. One Franklin and Jefferson project in the planning is an air pollution study. Particular emphasis will be on investigating the effects of asbestos fibers and carbon monoxide on both humans and animals.

The interaction between Jefferson and Franklin Institute will be concentrated at the Research Laboratories and the Bartol Research Foundation. Bartol has outposts in Greenland and the South Pole. In Swarthmore it has a staff of seventy scientists who investigate cosmic rays, nuclear physics, and solid state and surface physics. Bartol's renowned Director, Dr. Mar-

tin A. Pomerantz, holds an honorary doctorate degree from Sweden's Uppsala University. He was cited for his discovery of heavy nucleii in the primary cosmic radiation, and the first direct observation of solar-produced cosmic rays.

Jefferson and Franklin are mostly in the preliminary communication stages of the affiliation. With the Bartol Research Foundation, however, the first fruits of the intermingling of the natural and medical sciences are forming. Through the affiliation Jefferson now has a Department of Physics consisting of twenty members. It also has one student enrolled in the Graduate School with course work leading to a Ph.D. degree in physics. This course work is centered at the Bartol Foundation, whose scientists serve as faculty. Dr. Pomerantz, Professor of Physics and Acting Head of the Department, is coordinating the program. The Physics Department is in the School of Allied Health Sciences at Jefferson, of which Dr. John W. Goldschmidt is Dean. Because physics is a natural science, not a life science, the program will be developed here, where in future, departments of chemistry and mathematics are to be added. These three subjects rate preference in the development scheme for the School of Allied Health Sciences because of their basis in a baccalaureate program. At the appropriate point in their growth, the departments will be the nucleii in the formation of a separate College of Natural Sciences. Thus the potential which the affiliation offers Jefferson's academic expansion, mainly its graduate curriculum, is obvious. The School of Allied Health Sciences has in the affiliation, too, a source of interested students. In his exploration of The Franklin Institute Museum, the child can now encounter the excitement of medical science, and perhaps a spark will be lit. Eventually the effects of the affiliation are expected to reach the Medical College, too, with the offering of elective courses in subjects such as computer science, electronics, physics, etc. Franklin, in turn, now has the opportunity for clinical investigation in its research and can participate in degree granting as well.

The physics program reflects efforts which are being duplicated on many fronts. Coordinated projects between Jefferson and Franklin were not uncommon before the affiliation, but now the communications lines are buzzing.

The Liaison Committee provided for in the affiliation agreement consists of the Chairman of the Board of Jefferson, James M. Large, and of Franklin, Dr. Wynn Laurence LePage, the Presidents of Jefferson and Franklin, Dr. Peter A. Herbut and Dr. Athelstan Spilhaus respectively, and an exchange member of the Board of each institution. The exchange trustees are Gustave G. Amsterdam, representing Franklin on Jefferson's Board, and Brandon Barringer, representing Jefferson at Franklin. Both were trustees of each institution before the affiliation. Dr. LePage was elected Chairman and Dr. Herbut, Secretary, of the Committee. The group discusses matters of mutual interest and brings these before the Boards of each institution.

Reflecting on his pursuit and nurturing of the idea of affiliation with Franklin Institute, Dr. Herbut says: "Medical research can no longer be conducted without experts in the natural sciences—because of the involvement of computers and electronic technology." Five years ago it was just an idea. Today it is "a national model," in Dr. LePage's words, "perhaps to be emulated by other physical and life science institutions." Five years hence, Dr. Herbut sees a much more extensive penetration of the affiliation into Jefferson's operations. This would include more intertwining programs, a full student body enrolled in the physics program, introduction of new disciplines, such as chemistry and mathematics, into the graduate curriculum, the possible inception of the College of Natural Sciences, the presence of in-depth natural science courses in the medical curriculum, and the involvement of Jefferson and Franklin in conjoined departments.

The affiliation of two of the nation's oldest scientific institutions in an enterprise this modern is a unique adventure in education. It is an advance in learning for an advanced society—today's society and tomorrow's. The synergistic bond of life scientist and natural scientist provides the potential for a dynamic future.

For the 145th time

Special festivity opened the 1968 academic year at Jefferson. There were the traditional Opening Exercises in McClellan Hall. Prior to this Dr. and Mrs. Peter A. Herbut entertained at cocktails and dinner. While marking the start of another year, the Herbuts' party also christened the Jefferson Hall social schedule. The date was September 9, and the setting for cocktails, the lounge area adjacent to the west garden in the new basic science-commons building. At seven o'clock the guests crossed the garden to enter the candlelit dinner area. At eight o'clock the center of activity shifted to McClellan Hall in the College, where Dr. Philip J. Hodes, Professor of Radiology and Head of the Department, was main speaker at Opening Exercises. Following is his address, "Reflections on the Control of Medical Obsolescence."

I am honored, of course, to represent the professoriate on this occasion, However, it is only proper that you know that this honor implies no special personal merit on my part. The privilege is rotated annually through our entire Executive Faculty.

When I received Dean Kellow's letter inviting me to represent the Faculty, I thanked him in muted terms; for well could I foresee the hours of hard labor imposed upon me by his so-called "invitation." What Dean Kellow did not know was that his invitation would italicize my tenth year at Jefferson and my thirty-fifth year in academic medicine, and for this I *do* thank him most sincerely.

For helping me focus upon the direction of my reflections, I must thank a great physician of our own medical school.

The name John Chalmers DaCosta is revered by all Jeffersonians. One of the world's great surgeons, Dr. DaCosta will be remembered best for his brilliance as a teacher and author. His powers of expression, his aphorisms especially, live on despite the fact he died more than thirty years ago. Many of us remember him well, for we medical students from other medical schools used to visit Jefferson for the thrills and joys imparted by his lectures in the old "Pit," where we used to sit at his feet.

One thing Dr. DaCosta said which I have never forgotten and for which I shall be eternally grateful, sparked the theme for this evening's reflections. He said, "Each of us, no matter how old, is still an undergraduate in the school of experience. When a man thinks he has graduated, he becomes a public menace." This was the aphorism that placed me on course. I might take a moment to read to you one or two additional exemplary aphorisms which provoked many

Cocktail hour gets under way in the handsome new lounge area of Jefferson Hall. Party preceded Opening Exercises.

a full-throated laugh, such as: "People sometimes tell the truth out of pure meanness." Or this one which pricked many a bubble: "A fashionable doctor, like a pelican, can be recognized by the size of his bill." To repeat the aphorism that guided me: Dr. DaCosta said, "Each of us, no matter how old, is still an undergraduate in the school of experience. When a man thinks he has graduated, he becomes a public menace." How true and what an earthy way to express it. Actually what Dr. DaCosta was saying to the medical profession was: "Doctor, beware of becoming obsolete, and remember well that today's skills serve but today's ills."

I should like now to view this in proper perspective.

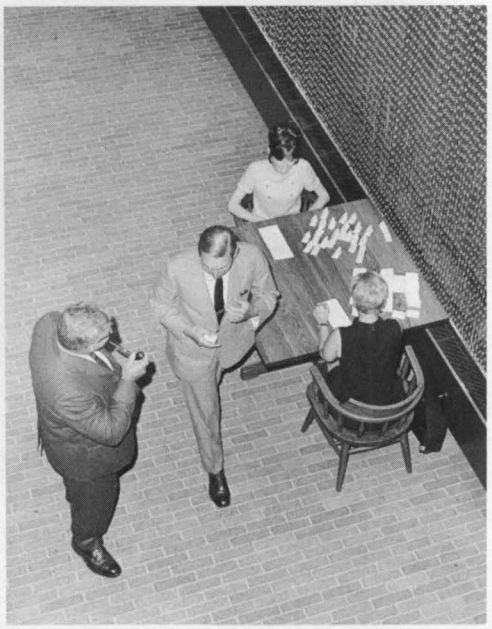
Since the time of Hippocrates, and even before, medical schools have been classified as clinical or scientific. The Hippocratic school was a clinical school. According to them, one needed but to be honorable, modest, unselfish and willing to work hard to be a physician. To them the art of medicine was all that mattered.

To the scientific school, the art of medicine was secondary. Whereas they, too, were concerned with the diagnosis and care of disease, they were far more concerned with creating a rational and logical scientific medical methodology. Unhappily, there existed little logic and science in medicine at that time. The scientific medical school, therefore, was doomed to the failure it eventually suffered.

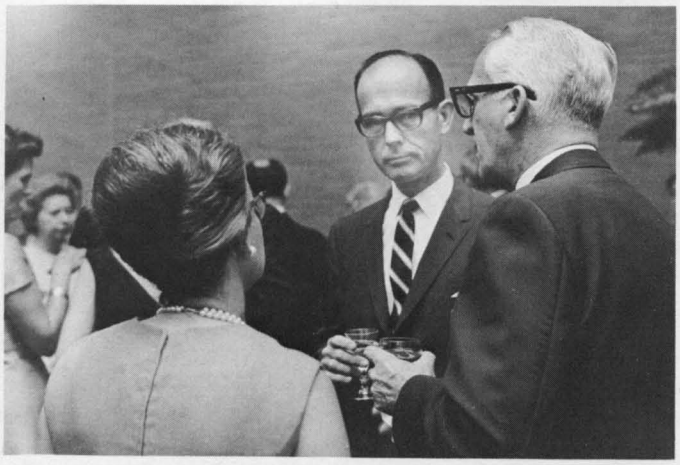
Today, this conflict no longer is justifiable, for the background of our profession spans both the art as well as the science. Today, scientific medicine does flourish and because of it, clinical medicine flourishes. But the problems created thereby are enormous.

Consider, if you will, a medical textbook just published. So rapid have been the advances in medicine, that by the time that textbook reaches us it is already almost two years out of date, despite the fact that it is fresh off the press. The why of such speedy obsolescence is not difficult to comprehend, for medicine has advanced more since World War II than in all the history of mankind.

Medicine is not a single basic area of scientific knowledge in the sense that one thinks of biochemistry or mathematics. Instead, it is an amalgam, a praxis which uses the entire scientific pyramid of knowledge in the discharge of its obligations. Reflect for a moment upon the spectrum of scientific knowledge taught in the first two years in medical school. Anatomy, physiology, biochemistry, pharmacology, microbiology, pathology, psychiatry, etc., each with its own traditional fund of knowledge, each with its own research and each undergoing its own intellectual explosions. Even the specialists in one field cannot grasp it all and fall behind. How can we possibly teach it all in medical school? The answer is obvious: we can't!



Top: Early arrivals (from left) Dr. S. A. D'Angelo, Professor of Anatomy, Assistant Dean John H. Killough and Associate Dean Samuel S. Conly, Jr., enter Jefferson Hall. Above: Dr. and Mrs. Herbert A. Luscombe (he's Head of the Department of Dermatology) join other guests. Dr. Wynn Laurence LePage, Chairman of The Franklin Institute's Board of Managers, follows the Luscombes. Above right: William P. Davis, III, Trustee of Jefferson's Board, and Mrs. Davis, receive seating cards. Dr. Roy G. Holly, Head of the Department of OB-GYN, (left) greets Board member Harry R. Neilson, Jr.



Top: Chairman of the Board, James M. Large. Middle: Alumni President Elmer H. Funk, Jr., (center) and Mrs. Funk discuss Association's 1970 Centennial with Arthur Osol, President of the Philadelphia College of Pharmacy and Science. Bottom: Trustee Brandon Barringer (right) entertains (from left) Hospital Director Frank J. Sweeney, Mrs. Barringer, and Mrs. N. Ramsay Pennypacker.

Why, in new words alone medical students add almost 12,000 to their vocabulary during their first year. The brutal fact is that this exponential accumulation of knowledge transcends the limits of the human mind to comprehend, let alone retain for useful purposes. This, then, has been and still is our dilemma: How shall we alter the curriculum? What new shall be used in educating you for the future? What old shall we discard?

Obviously, the uncompromising memorization of thousands of facts just has to stop. Learning must stem more from reason and less from authority. Minds must be kept elastic and resilient to welcome the new and discharge the old. But how? How to impart to the student adequate comprehension of subject matter without grinding him down and hardening his mind. How to condition him to think critically, to test the validity of all statements, even his teachers, without dampening the enthusiasm and idealism that drew him to medicine.

The task is not an easy one. Tampering with curricula which, for years, have produced prime physicians is a heavy responsibility. In doing so, one must ever be aware of the need for scholastic order. One must appreciate that it is far easier to destroy than to build. Above all else, one must recognize that unless a curriculum fosters the intellectual growth and maturation of medical students, any medical school can very well become a vocational or trade school.

Thus, one must again set goals for oneself. Ideas must be redefined and sharpened concerning the objectives of undergraduate medical education within a framework that assures professional competence without banking the fires that illumine the processes of liberal education. In our opinion, these objectives must include: 1. The acquiring of a fund of requisite medical knowledge. 2. The achieving of certain technical skills. 3. The developing of habits and attitudes that italicize the name "physician." 4. Instilling in the student the professional and ethical principles so clearly expressed in the Oath of Hippocrates to which all physicians swear. 5. And, finally, students must be guided so as to realize that their M.D. degree is but a milestone in a life in which learning can never stop.

In this regard, I am reminded of the student, who, exalted and carried away with enthusiasm by his graduation from college, cried aloud, "Here I am world. Here I am with my A.B. degree." To which the world somberly replied, "A worthy beginning, now let me teach you the rest of the alphabet." So, too, it shall be for you, the members of this first year class, when you graduate. For the scepter of obsolescence will threaten you far more than it did those of us who graduated twenty or more years ago when the doubling time of medical knowledge was not the ten years it is today.

Of course, no faculty can fully succeed in all of its objectives. Of this you can be sure, however: The curriculum as now structured here at Jefferson with its fewer scheduled hours, with time for electives, and time for thinking, will take you from once excessively didactic and essentially authoritarian channels to a more liberal scholarly climate with adequate opportunities for learning and critical evaluation.

To insure the learning of principles and concepts rather than the memorization of unlimited facts, department lines at Jefferson are beginning to crumble. Whole new fields are beginning to appear which cross once sacrosanct departmental prerogatives. Integration and cooperation between departmental faculties is taking place even now.

In such a ferment, more than ever before, faculties must be rational, reflective and able to integrate. Despite the difficulties imposed by the size of Jefferson's medical school, its tutorial responsibilities and challenges are gradually being met.

So much for the involvement of a faculty and its administration. Even more important are the students' responsibilities.

You, the members of the Class of 1972, are not joining us as an isolated group. Instead you are joining the members of the second, third, and fourth year classes, graduate students, interns and residents, the School of Allied Health Sciences and the faculty, to form the vibrant academic community known to the world as the Jefferson Medical College and Hospital. You will be free to join us and participate wherever your natural inclinations lead you. This does not mean that you will be allowed to wander aimlessly, but rather with solidness of purpose and scholarly design.

The going will not always be easy. Pressures and moments of uncertainty will be yours just as they were the generations of freshmen that preceded you. Just as they conquered and achieved, however, you too shall conquer and achieve. And the pride and satisfactions of success that were theirs, you too shall know. For you are just as competent and at least their equal in every respect.

There will be times when seemingly unreasonable demands will be made upon your time and capacity to learn. When this happens, remember that medical schools were not intended for idle minds or wishful thinking. You are being prepared to take care of the lives of human beings. You are being prepared to take care of their happiness, as well as their ills. The more time, thought and energy you give now, the better prepared you will be for your future.

Expect not to be taught and spoon-fed. Rather be determined to learn for yourselves, developing thereby the intellectual self-reliance without which no man leaves the masses. This should be your prime objective, not the garnering of grades as a contest of numbers.

What we have just been talking about is student motivation, personal as well as intellectual motivation, the ingredients that impel men and incite superiority.

Like idealism, student motivation is at its height at the beginning of an academic year and in your particular instance, when you first come to medical school. The hope is, we can maintain or even heighten your motivation during the next four years. Toward this end you will be projected almost immediately into the role of physician. You will have access to patients earlier; you will be part of the clinical scene earlier; the contagion and delights of clinical discovery, as well as the heartaches of death will be yours earlier. All this to maintain your interest, idealism and motivation, as we feed you the concepts, theories and facts you need to get started in your chosen profession. There lurks one danger of so enjoying the delights of taking care of people that you lapse into the attitudes of a tradesman and not a medical scientist. Your world should be not alone the world of application of the skills and knowledge that you will be taught. Instead yours should be a world in which application is guided by science, reason and a thirst for learning.

Time will be your enemy, time and the obsolescence it imposes. You will have to learn, unlearn, and then learn again for the rest of your lives. And there is no better time than the present to condition yourselves to doing so.

We, your teachers, can do nothing more than show you the way. We shall be happy to share with you all that we know in an atmosphere of mutual respect and mutual curiosity. Be assured we shall consider no question too trivial to be asked; and no answer will be so worded as to offend the student who has asked the question. For by asking that question, the student has given meaning and substance to a dialogue that must exist between student and teacher. One doesn't sharpen knives by cutting butter. Nor does passivity sharpen intellects. Like steel, minds are honed best by contact with objects of equal strength and quality. And just as the finest cutting edges may be blunted by being handled without purpose or with disrespect, so too can fine minds be degraded.

These, my friends are my reflections upon the control of medical obsolescence. They stem from experience with almost four thousand medical students, almost four hundred radiologic residents and more than ten years as a member of the Commission on Education of the American College of Radiology, of which I was Chairman for five years.

If between us we do our jobs well, then certainly will you agree with Thomas Henry Huxley who said, "The rung of the ladder was never meant to rest upon, but only to hold a man's foot long enough to enable him to put the other somewhat higher."

Following cocktail hour guests cross the west garden of Jefferson Hall. More than one hundred guests attended the Herbuts' dinner, served on the west patio of the first floor dining area. Photo also shows mezzanine lounge area.

Top: Another view of the handsome dining area. Bottom: President Peter A. Herbut gives his full attention to Mrs. James M. Large.

the Jefferson comment on . . .

The special insert that follows speaks for itself. I won't attempt to gild the lily . . . the financial problems of higher education are real and most of them are applicable to your Medical College. If nothing else, this article should convince you of the ever increasing importance of your contribution to Alumni Annual Giving.

You certainly deserve our assurance that we will do everything possible to exploit to the full every conceivable source of financial aid to Jefferson. Fortunately, the United States Congress is concerned about health care and we have the beginnings of a dialogue with its members. This should benefit Jefferson through the writing of specific legislation. There is an equally concerned, able Pennsylvania State Legislature whose leadership has taken the initiative to seek us out in order to discuss how we can best relate our needs to the State's health care problems and thus together insure continued and increasing Commonwealth support for Jefferson.

The major educational foundations have given us every indication of enthusiastic willingness to help if we will work with them on ways to best solve the nation's problems of medical care.

Last but not least, there are in the community many individuals with substantial resources who should be responsive to intelligent persuasion from us.

In a nutshell, we intend to press a vigorous selling effort. Like it or not, we must recognize that our peers, Harvard, Hopkins, Stanford, to name a few, have been successful in fund raising because they have been aggressive and sales minded. Jefferson is going to have to bend a little and the warm club-like atmosphere may be disturbed from time to time. There is no reason, however, why we cannot be just as successful as our peers have been and will continue to be in spite of all their claims that they are going bankrupt.

N. Ramsay Pennypacker,
Vice President for Development

Mr. Pennypacker

A Special Report

The Plain Fact Is...

...our colleges and universities "are facing what might easily become a crisis"

OUR COLLEGES AND UNIVERSITIES, over the last 20 years, have experienced an expansion that is without precedent—in buildings and in budgets, in students and in professors, in reputation and in rewards—in power and pride and in deserved prestige. As we try to tell our countrymen that we are faced with imminent bankruptcy, we confront the painful fact that in the eyes of the American people—and I think also in the eyes of disinterested observers abroad—we are a triumphant success. The observers seem to believe—and I believe myself—that the American campus ranks with the American corporation among the handful of first-class contributions which our civilization has made to the annals of human institutions. We come before the country to plead financial emergency at a time when our public standing has never been higher. It is at the least an unhappy accident of timing.

—McGEORGE BUNDY
President, The Ford Foundation

A Special Report

A STATE-SUPPORTED UNIVERSITY in the Midwest makes a sad announcement: With more well-qualified applicants for its freshman class than ever before, the university must tighten its entrance requirements. Qualified though the kids are, the university must turn many of them away.

▸ A private college in New England raises its tuition fee for the seventh time since World War II. In doing so, it admits ruefully: "Many of the best high-school graduates can't afford to come here, any more."

▸ A state college network in the West, long regarded as one of the nation's finest, cannot offer its students the usual range of instruction this year. Despite intensive recruiting, more than 1,000 openings on the faculty were unfilled at the start of the academic year.

▸ A church-related college in the South, whose denomination's leaders believe in strict separation of church and state, severs its church ties in order to seek money from the government. The college must have such money, say its administrators—or it will die.

Outwardly, America's colleges and universities appear more affluent than at any time in the past. In the aggregate they have more money, more students, more buildings, better-paid faculties, than ever before in their history.

Yet many are on the edge of deep trouble.

"The plain fact," in the words of the president of Columbia University, "is that we are facing what might easily become a crisis in the financing of American higher education, and the sooner we know about it, the better off we will be."

THE TROUBLE is not limited to a few institutions. Nor does it affect only one or two types of institution. Large universities, small colleges; state-supported and privately supported: the problem faces them all.

Before preparing this report, the editors asked more than 500 college and university presidents to tell us—off the record, if they preferred—just how they viewed the future of their institutions. With rare exceptions, the presidents agreed on this assessment: *That the money is not now in sight to meet the rising costs of higher education . . . to serve the growing numbers of bright, qualified students . . . and to pay for the myriad activities that Americans now demand of their colleges and universities.*

Important programs and necessary new buildings are

> ALL OF US are hard-put to see where we are going to get the funds to meet the educational demands of the coming decade.
>
> *—A university president*

being deferred for lack of money, the presidents said. Many admitted to budget-tightening measures reminiscent of those taken in days of the Great Depression.

Is this new? Haven't the colleges and universities always needed money? Is there something different about the situation today?

The answer is "Yes"—to all three questions.

The president of a large state university gave us this view of the over-all situation, at both the publicly and the privately supported institutions of higher education:

"A good many institutions of higher learning are operating at a deficit," he said. "First, the private colleges and universities: they are eating into their endowments in order to meet their expenses. Second, the public institutions. It is not legal to spend beyond our means, but here we have another kind of deficit: a deficit in quality, which will be extremely difficult to remedy even when adequate funding becomes available."

Other presidents' comments were equally revealing:

▸ *From a university in the Ivy League:* "Independent national universities face an uncertain future which threatens to blunt their thrust, curb their leadership, and jeopardize their independence. Every one that I know about is facing a deficit in its operating budget, this year or next. And all of us are hard-put to see where we are going to get the funds to meet the educational demands of the coming decade."

▸ *From a municipal college in the Midwest:* "The best word to describe our situation is 'desperate.' We are operating at a deficit of about 20 per cent of our total expenditure."

▸ *From a private liberal arts college in Missouri:* "Only by increasing our tuition charges are we keeping our heads above water. Expenditures are galloping to such a degree that I don't know how we will make out in the future."

▸ *From a church-related university on the West Coast:* "We face very serious problems. Even though our tuition is below-average, we have already priced ourselves out of part of our market. We have gone deeply into debt for dormitories. Our church support is declining. At times, the outlook is grim."

▸ *From a state university in the Big Ten:* "The budget for our operations must be considered tight. It is less than we need to meet the demands upon the university for teaching, research, and public service."

▸ *From a small liberal arts college in Ohio:* "We are on a hand-to-mouth, 'kitchen' economy. Our ten-year projections indicate that we can maintain our quality only by doubling in size."

▸ *From a small college in the Northeast:* "For the first time in its 150-year history, our college has a planned deficit. We are holding our heads above water at the moment—but, in terms of quality education, this cannot long continue without additional means of support."

▸ *From a state college in California:* "We are not permitted to operate at a deficit. The funding of our budget at a level considerably below that proposed by the trustees has made it difficult for us to recruit staff members and has forced us to defer very-much-needed improvements in our existing activities."

▸ *From a women's college in the South:* "For the coming year, our budget is the tightest we have had in my fifteen years as president."

WHAT'S GONE WRONG?

Talk of the sort quoted above may seem strange, as one looks at the unparalleled growth of America's colleges and universities during the past decade:

▸ Hardly a campus in the land does not have a brand-new building or one under construction. Colleges and universities are spending more than $2 billion a year for capital expansion.

▸ Faculty salaries have nearly doubled in the past decade. (But in some regions they are still woefully low.)

▸ Private, voluntary support to colleges and universities has more than tripled since 1958. Higher education's share of the philanthropic dollar has risen from 11 per cent to 17 per cent.

▸ State tax funds appropriated for higher education have increased 44 per cent in just two years, to a 1967–68 total of nearly $4.4 billion. This is 214 per cent more than the sum appropriated eight years ago.

▸ Endowment funds have more than doubled over the past decade. They're now estimated to be about $12 billion, at market value.

▸ Federal funds going to institutions of higher education have more than doubled in four years.

▸ More than 300 new colleges and universities have been founded since 1945.

▸ All in all, the total expenditure this year for U.S. higher education is some $18 billion—more than three times as much as in 1955.

Moreover, America's colleges and universities have absorbed the tidal wave of students that was supposed to have swamped them by now. They have managed to fulfill their teaching and research functions and to undertake a variety of new public-service programs—despite the ominous predictions of faculty shortages heard ten or fifteen years ago. Says one foundation official:

"The system is bigger, stronger, and more productive than it has ever been, than any system of higher education in the world."

Why, then, the growing concern?

Re-examine the progress of the past ten years, and this fact becomes apparent: The progress was great—but it did not deal with the basic flaws in higher education's financial situation. Rather, it made the whole enterprise bigger, more sophisticated, and more expensive.

Voluntary contributions grew—but the complexity and costliness of the nation's colleges and universities grew faster.

Endowment funds grew—but the need for the income from them grew faster.

State appropriations grew—but the need grew faster.

Faculty salaries were rising. New courses were needed, due to the unprecedented "knowledge explosion." More costly apparatus was required, as scientific progress grew more complex. Enrollments burgeoned—and students stayed on for more advanced (and more expensive) training at higher levels.

And, for most of the nation's 2,300 colleges and universities, an old problem remained—and was intensified, as the costs of education rose: gifts, endowment, and government funds continued to go, disproportionately, to a relative handful of institutions. Some 36 per cent of all voluntary contributions, for example, went to just 55 major universities. Some 90 per cent of all endowment funds were owned by fewer than 5 per cent of the institutions. In 1966, the most recent year reported, some 70 per cent of the federal government's funds for higher education went to 100 institutions.

McGeorge Bundy, the president of the Ford Foundation, puts it this way:

"Great gains have been made; the academic profession has reached a wholly new level of economic strength, and the instruments of excellence—the libraries and

Drawings by Peter Hooven

EACH NEW ATTEMPT at a massive solution has left the trustees and presidents just where they started.

—A foundation president

laboratories—are stronger than ever. But the university that pauses to look back will quickly fall behind in the endless race to the future."

Mr. Bundy says further:

"The greatest general problem of higher education is money . . . . The multiplying needs of the nation's colleges and universities force a recognition that each new attempt at a massive solution has left the trustees and presidents just where they started: in very great need."

THE FINANCIAL PROBLEMS of higher education are unlike those, say, of industry. Colleges and universities do not operate like General Motors. On the contrary, they sell their two primary services—teaching and research—at a loss.

It is safe to say (although details may differ from institution to institution) that the American college or university student pays only a fraction of the cost of his education.

This cost varies with the level of education and with the educational practices of the institution he attends. Undergraduate education, for instance, costs less than graduate education—which in turn may cost less than medical education. And the cost of educating a student in the sciences is greater than in the humanities. Whatever the variations, however, the student's tuition and fees pay only a portion of the bill.

"As private enterprises," says one president, "we don't seem to be doing so well. We lose money every time we take in another student."

Of course, neither he nor his colleagues on other campuses would have it otherwise. Nor, it seems clear, would most of the American people.

But just as student instruction is provided at a substantial reduction from the actual cost, so is the research that the nation's universities perform on a vast scale for the federal government. On this particular below-cost service, as contrasted with that involving the provision of education to their students, many colleges and universities are considerably less than enthusiastic.

In brief: The federal government rarely pays the full cost of the research it sponsors. Most of the money goes for *direct costs* (compensation for faculty time, equipment, computer use, etc.) Some of it goes for *indirect costs* (such "overhead" costs of the institution as payroll departments, libraries, etc.). Government policy stipulates that the institutions receiving federal research grants

must share in the cost of the research by contributing, in some fashion, a percentage of the total amount of the grant.

University presidents have insisted for many years that the government should pay the full cost of the research it sponsors. Under the present system of cost-sharing, they point out, it actually costs their institutions money to conduct federally sponsored research. This has been one of the most controversial issues in the partnership between higher education and the federal government, and it continues to be so.

In commercial terms, then, colleges and universities sell their products at a loss. If they are to avoid going bankrupt, they must make up—from other sources—the difference between the income they receive for their services and the money they spend to provide them.

With costs spiraling upward, that task becomes ever more formidable.

HERE ARE SOME of the harsh facts: Operating expenditures for higher education more than tripled during the past decade—from about $4 billion in 1956 to $12.7 billion last year. By 1970, if government projections are correct, colleges and universities will be spending over $18 billion for their current operations, plus another $2 billion or $3 billion for capital expansion.

Why such steep increases in expenditures? There are several reasons:

- Student enrollment is now close to 7 million—twice what it was in 1960.
- The rapid accumulation of new knowledge and a resulting trend toward specialization have led to a broadening of the curricula, a sharp increase in graduate study, a need for sophisticated new equipment, and increased library acquisitions. All are very costly.
- An unprecedented growth in faculty salaries—long overdue—has raised instructional costs at most institutions. (Faculty salaries account for roughly half of the educational expenses of the average institution of higher learning.)
- About 20 per cent of the financial "growth" during the past decade is accounted for by inflation.

Not only has the over-all cost of higher education increased markedly, but the *cost per student* has risen steadily, despite increases in enrollment which might, in any other "industry," be expected to lower the unit cost.

Colleges and universities apparently have not improved their productivity at the same pace as the economy generally. A recent study of the financial trends in three private universities illustrates this. Between 1905 and 1966, the educational cost per student at the three universities, viewed compositely, increased 20-fold, against an economy-wide increase of three- to four-fold. In each of the three periods of peace, direct costs per student increased about 8 per cent, against a 2 per cent annual increase in the economy-wide index.

Some observers conclude from this that higher education must be made more efficient—that ways must be found to educate more students with fewer faculty and staff members. Some institutions have moved in this direction by adopting a year-round calendar of operations, permitting them to make maximum use of the faculty and physical plant. Instructional devices, programmed learning, closed-circuit television, and other technological systems are being employed to increase productivity and to gain economies through larger classes.

The problem, however, is to increase efficiency without jeopardizing the special character of higher education. Scholars are quick to point out that management techniques and business practices cannot be applied easily to colleges and universities. They observe, for example, that on strict cost-accounting principles, a college could not justify its library. A physics professor, complaining about large classes, remarks: "When you get a hundred kids in a classroom, that's not education; that's show business."

The college and university presidents whom we surveyed in the preparation of this report generally believe their institutions are making every dollar work. There is room for improvement, they acknowledge. But few feel the financial problems of higher education can be significantly reduced through more efficient management.

ONE THING seems fairly certain: The costs of higher education will continue to rise. To meet their projected expenses, colleges and universities will need to increase their annual operating income by more than $4 billion during the four-year period between 1966 and 1970. They must find another $8 billion or $10 billion for capital outlays.

Consider what this might mean for a typical private

university. A recent report presented this hypothetical case, based on actual projections of university expenditures and income:

The institution's budget is now in balance. Its educational and general expenditures total $24.5 million a year.

Assume that the university's expenditures per student will continue to grow at the rate of the past ten years—7.5 per cent annually. Assume, too, that the university's enrollment will continue to grow at *its* rate of the past ten years—3.4 per cent annually. Ten years hence, the institution's educational and general expenses would total $70.7 million.

At best, continues the analysis, tuition payments in the next ten years will grow at a rate of 6 per cent a year; at worst, at a rate of 4 per cent—compared with 9 per cent over the *past* ten years. Endowment income will grow at a rate of 3.5 to 5 per cent, compared with 7.7 per cent over the past decade. Gifts and grants will grow at a rate of 4.5 to 6 per cent, compared with 6.5 per cent over the past decade.

"If the income from private sources grew at the *higher* rates projected," says the analysis, "it would increase from $24.5 million to $50.9 million—leaving a deficit of $19.8 million, ten years hence. If its income from private sources grew at the *lower* rates projected, it would have increased to only $43 million—leaving a shortage of $27.8 million, ten years hence."

In publicly supported colleges and universities, the outlook is no brighter, although the gloom is of a different variety. Says the report of a study by two professors at the University of Wisconsin:

"Public institutions of higher education in the United States are now operating at a quality deficit of more than a billion dollars a year. In addition, despite heavy construction schedules, they have accumulated a major capital lag."

The deficit cited by the Wisconsin professors is a computation of the cost of bringing the public institutions' expenditures per student to a level comparable with that at the private institutions. With the enrollment growth expected by 1975, the professors calculate, the "quality deficit" in public higher education will reach $2.5 billion.

The problem is caused, in large part, by the tremendous enrollment increases in public colleges and universities. The institutions' resources, says the Wisconsin study, "may not prove equal to the task."

Moreover, there are indications that public institutions may be nearing the limit of expansion, unless they receive a massive infusion of new funds. One of every seven public universities rejected qualified applicants from their own states last fall; two of every seven rejected qualified applicants from other states. One of every ten raised admissions standards for in-state students; one in six raised standards for out-of-state students.

WILL THE FUNDS be found to meet the projected cost increases of higher education? Colleges and universities have traditionally received their operating income from three sources: *from the students*, in the form of tuition and fees; *from the state*, in the form of legislative appropriations; and *from individuals, foundations, and corporations*, in the form of gifts. (Money from the federal government for operating expenses is still more of a hope than a reality.)

Can these traditional sources of funds continue to meet the need? The question is much on the minds of the nation's college and university presidents.

▸ **Tuition and fees:** They have been rising—and are likely to rise more. A number of private "prestige" institutions have passed the $2,000 mark. Public institutions are under mounting pressure to raise tuition and fees, and their student charges have been rising at a faster rate than those in private institutions.

The problem of student charges is one of the most controversial issues in higher education today. Some feel that the student, as the direct beneficiary of an education, should pay most or all of its real costs. Others disagree emphatically: since society as a whole is the ultimate beneficiary, they argue, every student should have the right to an education, whether he can afford it or not.

The leaders of publicly supported colleges and universities are almost unanimous on this point: that higher tuitions and fees will erode the premise of equal oppor-

TUITION: We are reaching a point of diminishing returns. —*A college president*

It's like buying a second home. —*A parent*

tunity on which public higher education is based. They would like to see the present trend reversed—toward free, or at least lower-cost, higher education.

Leaders of private institutions find the rising tuitions equally disturbing. Heavily dependent upon the income they receive from students, many such institutions find that raising their tuition is inescapable, as costs rise. Scores of presidents surveyed for this report, however, said that mounting tuition costs are "pricing us out of the market." Said one: "As our tuition rises beyond the reach of a larger and larger segment of the college-age population, we find it more and more difficult to attract our quota of students. We are reaching a point of diminishing returns."

Parents and students also are worried. Said one father who has been financing a college education for three daughters: "It's like buying a second home."

Stanford Professor Roger A. Freeman says it isn't really that bad. In his book, *Crisis in College Finance?*, he points out that when tuition increases have been adjusted to the shrinking value of the dollar or are related to rising levels of income, the cost to the student actually declined between 1941 and 1961. But this is small consolation to a man with an annual salary of $15,000 and three daughters in college.

Colleges and universities will be under increasing pressure to raise their rates still higher, but if they do, they will run the risk of pricing themselves beyond the means of more and more students. Indeed, the evidence is strong that resistance to high tuition is growing, even in relatively well-to-do families. The College Scholarship Service, an arm of the College Entrance Examination Board, reported recently that some middle- and upper-income parents have been "substituting relatively low-cost institutions" because of the rising prices at some of the nation's colleges and universities.

The presidents of such institutions have nightmares over such trends. One of them, the head of a private college in Minnesota, told us:

"We are so dependent upon tuition for approximately 50 per cent of our operating expenses that if 40 fewer students come in September than we expect, we could have a budgetary deficit this year of $50,000 or more."

► **State appropriations:** The 50 states have appropriated nearly $4.4 billion for their colleges and universities this year—a figure that includes neither the $1–$2 billion spent by public institutions for capital expansion, nor the appropriations of local governments, which account for about 10 per cent of all public appropriations for the operating expenses of higher education.

The record set by the states is remarkable—one that many observers would have declared impossible, as recently as eight years ago. In those eight years, the states have increased their appropriations for higher education by an incredible 214 per cent.

Can the states sustain this growth in their support of higher education? Will they be willing to do so?

The more pessimistic observers believe that the states can't and won't, without a drastic overhaul in the tax structures on which state financing is based. The most productive tax sources, such observers say, have been pre-empted by the federal government. They also believe that more and more state funds will be used, in the future, to meet increasing demands for other services.

Optimists, on the other hand, are convinced the states are far from reaching the upper limits of their ability to raise revenue. Tax reforms, they say, will enable states to increase their annual budgets sufficiently to meet higher education's needs.

The debate is theoretical. As a staff report to the Advisory Commission on Intergovernmental Relations concluded: "The appraisal of a state's fiscal capacity is a political decision [that] it alone can make. It is not a researchable problem."

Ultimately, in short, the decision rests with the taxpayer.

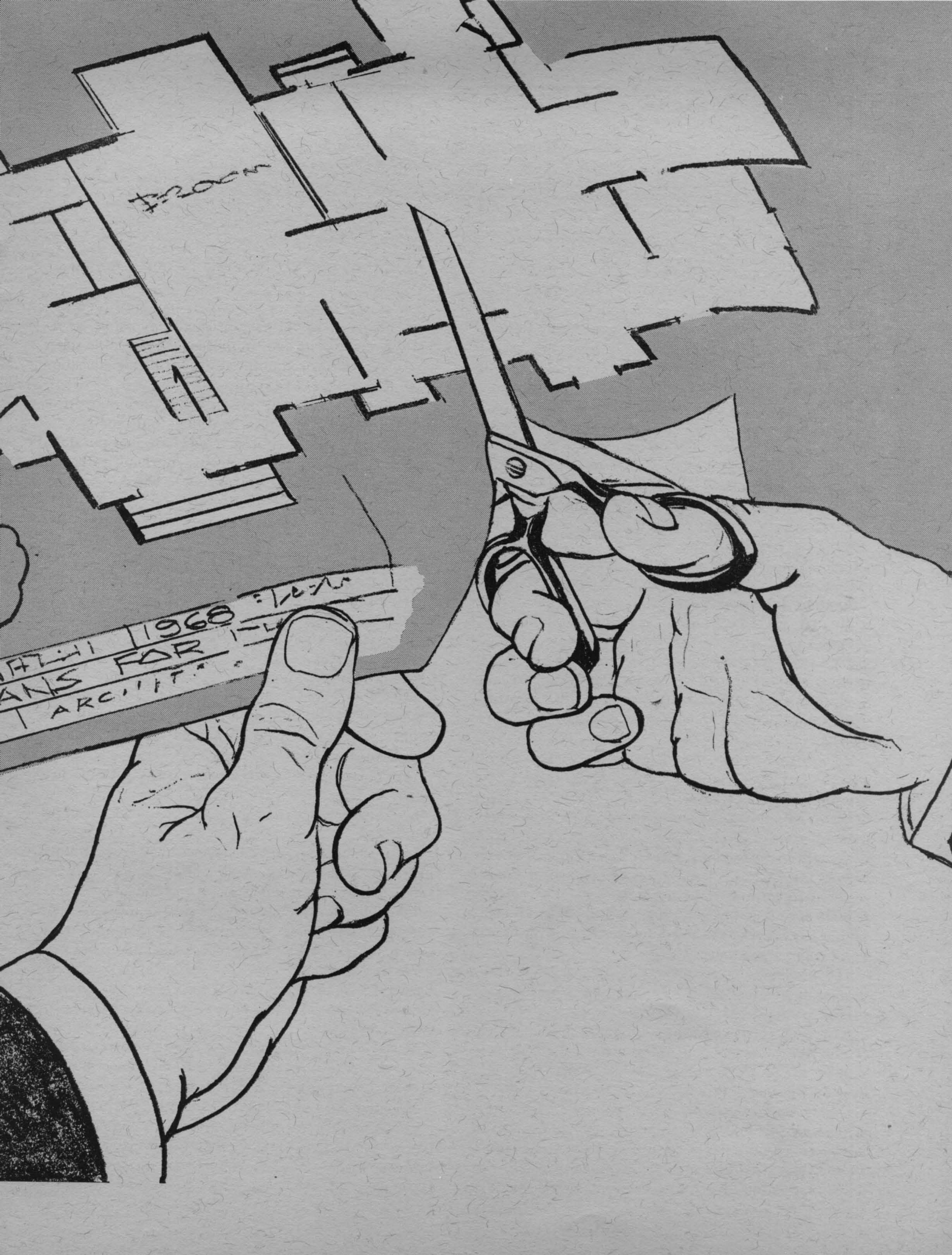
► **Voluntary private gifts:** Gifts are vital to higher education.

In private colleges and universities, they are part of the lifeblood. Such institutions commonly budget a deficit, and then pray that it will be met by private gifts.

In public institutions, private gifts supplement state appropriations. They provide what is often called "a margin for excellence." Many public institutions use such funds to raise faculty salaries above the levels paid for by the state, and are thus able to compete for top scholars. A number of institutions depend upon private gifts for student facilities that the state does not provide.

Will private giving grow fast enough to meet the growing need? As with state appropriations, opinions vary.

John J. Schwartz, executive director of the American Association of Fund-Raising Counsel, feels there is a great untapped reservoir. At present, for example, only one out of every four alumni and alumnae contributes to higher education. And, while American business corporations gave an estimated $300 million to education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in 1965–66, this was only about 0.37 per cent of their net income before taxes. On the average, companies contribute only about 1.10 per cent of net income before taxes to all causes—well below the 5 per cent allowed by the Federal government. Certainly there is room for expansion.

(Colleges and universities are working overtime to tap this reservoir. Mr. Schwartz's association alone lists 117 colleges and universities that are now campaigning to raise a combined total of $4 billion.)

But others are not so certain that expansion in private giving will indeed take place. The 46th annual survey by the John Price Jones Company, a firm of fund-raising counselors, sampled 50 colleges and universities and found a decline in voluntary giving of 8.7 per cent in 12 months. The Council for Financial Aid to Education and the American Alumni Council calculate that voluntary support for higher education in 1965–66 declined by some 1.2 per cent in the same period.

Refining these figures gives them more meaning. The major private universities, for example, received about 36 per cent of the $1.2 billion given to higher education —a decrease from the previous year. Private liberal arts colleges also fell behind: coeducational colleges dropped 10 per cent, men's colleges dropped 16.2 per cent, and women's colleges dropped 12.6 per cent. State institutions, on the other hand, increased their private support by 23.8 per cent.

The record of some cohesive groups of colleges and universities is also revealing. Voluntary support of eight Ivy League institutions declined 27.8 per cent, for a total loss of $61 million. The Seven College Conference, a group of women's colleges, reported a drop of 41 per cent. The Associated Colleges of the Midwest dropped about

ON THE QUESTION OF FEDERAL AID, everybody seems to be running to the same side of the boat.

—A college president

5.5 per cent. The Council of Southern Universities declined 6.2 per cent. Fifty-five major private universities received 7.7 per cent less from gifts.

Four groups gained. The state universities and colleges received 20.5 per cent more in private gifts in 1965–66 than in the previous year. Fourteen technological institutions gained 10.8 per cent. Members of the Great Lakes College Association gained 5.6 per cent. And Western Conference universities, plus the University of Chicago, gained 34.5 per cent. (Within each such group, of course, individual colleges may have gained or lost differently from the group as a whole.)

The biggest drop in voluntary contributions came in foundation grants. Although this may have been due, in part, to the fact that there had been some unusually large grants the previous year, it may also have been a foretaste of things to come. Many of those who observe foundations closely think such grants will be harder and harder for colleges and universities to come by, in years to come.

FEARING that the traditional sources of revenue may not yield the necessary funds, college and university presidents are looking more and more to Washington for the solution to their financial problems.

The president of a large state university in the South, whose views are typical of many, told us: "Increased federal support is essential to the fiscal stability of the colleges and universities of the land. And such aid is a proper federal expenditure."

Most of his colleagues agreed—some reluctantly. Said the president of a college in Iowa: "I don't like it . . . but it may be inevitable." Another remarked: "On the question of federal aid, everybody seems to be running to the same side of the boat."

More federal aid is almost certain to come. The question is, When? And in what form?

Realism compels this answer: In the near future, the federal government is unlikely to provide substantial support for the operating expenses of the country's colleges and universities.

The war in Vietnam is one reason. Painful effects of war-prompted economies have already been felt on the campuses. The effective federal funding of research per faculty member is declining. Construction grants are becoming scarcer. Fellowship programs either have been reduced or have merely held the line.

Indeed, the changes in the flow of federal money to the campuses may be the major event that has brought higher education's financial problems to their present head.

Would things be different in a peacetime economy? Many college and university administrators think so. They already are planning for the day when the Vietnam war ends and when, the thinking goes, huge sums of federal money will be available for higher education. It is no secret that some government officials are operating on the same assumption and are designing new programs of support for higher education, to be put into effect when the war ends.

Others are not so certain the postwar money flow is that inevitable. One of the doubters is Clark Kerr, former president of the University of California and a man with considerable first-hand knowledge of the relationship between higher education and the federal government. Mr. Kerr is inclined to believe that the colleges and universities will have to fight for their place on a national priority list that will be crammed with a number of other pressing

COLLEGES AND UNIVERSITIES are tough. They have survived countless cataclysms and crises, and one way or another they will endure.

—A college president

problems: air and water pollution, civil rights, and the plight of the nation's cities, to name but a few.

One thing seems clear: The pattern of federal aid must change dramatically, if it is to help solve the financial problems of U.S. higher education. Directly or indirectly, more federal dollars must be applied to meeting the increasing costs of *operating* the colleges and universities, even as the government continues its support of students, of building programs, and of research.

IN SEARCHING for a way out of their financial difficulties, colleges and universities face the hazard that their individual interests may conflict. Some form of competition (since the institutions are many and the sources of dollars few) is inevitable and healthy. But one form of competition is potentially dangerous and destructive and, in the view of impartial supporters of all institutions of higher education, must be avoided at all costs.

This is a conflict between private and public colleges and universities.

In simpler times, there was little cause for friction. Public institutions received their funds from the states. Private institutions received *their* funds from private sources.

No longer. All along the line, and with increasing frequency, both types of institution are seeking both public and private support—often from the same sources:

► **The state treasuries:** More and more private institutions are suggesting that some form of state aid is not only necessary but appropriate. A number of states have already enacted programs of aid to students attending private institutions. Some 40 per cent of the state appropriation for higher education in Pennsylvania now goes to private institutions.

► **The private philanthropists:** More and more public institutions are seeking gifts from individuals, foundations, and corporations, to supplement the funds they receive from the state. As noted earlier in this report, their efforts are meeting with growing success.

► **The federal government:** Both public and private colleges and universities receive funds from Washington. But the different types of institution sometimes disagree on the fundamentals of distributing it.

Should the government help pay the operating costs of colleges and universities by making grants directly to the institutions—perhaps through a formula based on enrollments? The heads of many public institutions are inclined to think so. The heads of many low-enrollment, high-tuition private institutions, by contrast, tend to favor programs that operate indirectly—perhaps by giving enough money to the students themselves, to enable them to pay for an education at whatever institutions they might choose.

Similarly, the strongest opposition to long-term, federally underwritten student-loan plans—some envisioning a payback period extending over most of one's lifetime—comes from public institutions, while some private-college and university leaders find, in such plans, a hope that their institutions might be able to charge "full-cost" tuition rates without barring students whose families can't afford to pay.

In such frictional situations, involving not only billions of dollars but also some very deep-seated convictions about the country's educational philosophy, the chances that destructive conflicts might develop are obviously great. If such conflicts were to grow, they could only sap the energies of all who engage in them.

IF THERE IS INDEED A CRISIS building in American higher education, it is not solely a problem of meeting the minimum needs of our colleges and universities in the years ahead. Nor, for most, is it a question of survive or perish; "colleges and universities are tough," as one president put it; "they have survived countless cataclysms and crises, and one way or another they will endure."

The real crisis will be finding the means of providing the quality, the innovation, the pioneering that the nation needs, if its system of higher education is to meet the demands of the morrow.

Not only must America's colleges and universities serve millions more students in the years ahead; they must also equip these young people to live in a world that is changing with incredible swiftness and complexity. At the same time, they must carry on the basic research on which the nation's scientific and technological advancement rests. And they must be ever-ready to help meet the immediate and long-range needs of society; ever-responsive to society's demands.

At present, the questions outnumber the answers.

► How can the United States make sure that its colleges and universities not only will accomplish the minimum task but will, in the words of one corporate leader,

NOTHING IS MORE IMPORTANT than the critical and knowledgeable interest of our alumni. It cannot possibly be measured in merely financial terms.
—A university president

provide "an educational system adequate to enable us to live in the complex environment of this century?"

▸ Do we really want to preserve the diversity of an educational system that has brought the country a strength unknown in any other time or any other place? And, if so, *can* we?

▸ How can we provide every youth with as much education as he is qualified for?

▸ Can a balance be achieved in the sources of higher education's support, so that public and private institutions can flourish side by side?

▸ How can federal money best be channeled into our colleges and universities without jeopardizing their independence and without discouraging support either from the state legislatures or from private philanthropy?

The answers will come painfully; there is no panacea. Quick solutions, fashioned in an atmosphere of crisis, are likely to compound the problem. The right answers will emerge only from greater understanding on the part of the country's citizens, from honest and candid discussion of the problems, and from the cooperation and support of all elements of society.

The president of a state university in the Southwest told us: "Among state universities, nothing is more important than the growing critical and knowledgeable interest of our alumni. That interest leads to general support. It cannot possibly be measured in merely financial terms."

A private college president said: "The greatest single source of improvement can come from a realization on the part of a broad segment of our population that higher education must have support. Not only will people have to give more, but more will have to give."

But *do* people understand? A special study by the Council for Financial Aid to Education found that:

▸ 82 per cent of persons in managerial positions or the professions do not consider American business to be an important source of gift support for colleges and universities.

▸ 59 per cent of persons with incomes of $10,000 or over do not think higher education has financial problems.

▸ 52 per cent of college graduates apparently are not aware that their alma mater has financial problems.

To America's colleges and universities, these are the most discouraging revelations of all. Unless the American people—especially the college and university alumni—can come alive to the reality of higher education's impending crisis, then the problems of today will be the disasters of tomorrow.

The report on this and the preceding 15 pages is the product of a cooperative endeavor in which scores of schools, colleges, and universities are taking part. It was prepared under the direction of the group listed below, who form EDITORIAL PROJECTS FOR EDUCATION, a non-profit organization associated with the American Alumni Council.

the jefferson scene

mental health care

Jefferson Medical College initiated operation of a 600 bed self-contained hospital for mental health treatment at the Philadelphia State Hospital at Byberry in September. The Jefferson Medical College Unit of the Byberry institution, as it will be called, is an innovative approach to mental health. For each 100 patients in the hospital the staff will include two full-time psychiatrists, a social worker, a case-aid worker, a psychologist, an occupational therapist, an activity therapist, two psychiatric nurse supervisors, a psychiatric resident and two student professional assistants. The intensive treatment of this program will be provided for patients from the geographic area served by Jefferson's Community Mental Health Center in the College vicinity. Dr. Daniel Lieberman, Professor of Psychiatry and Director of the Community Mental Health Center, Dr. Floyd S. Cornelison, Jr., Professor of Psychiatry and Head of the Department, and Dr. Daniel Blain, the State Hospital Director, have been planning the unit for the past year. At the luncheon held to launch the program, Dr. Stanley F. Yolles, Director of the National Institute of Mental Health, was guest speaker and complimented Jefferson for its "initiative and courage in starting new traditions in medical education and patient care."

liberal arts at jefferson

The School of Allied Health Sciences opened its initial semester, fall 1968, with four basic liberal arts courses in the curriculum. Jefferson's affiliation with the Philadelphia College of Pharmacy and Science made possible the offering of English, Psychology, Sociology and History. This pilot program will provide information for development of a more advanced curriculum in subsequent semesters. The new School of Allied Health Sciences curriculum enables a student to work toward a baccalaureate degree at Jefferson, with courses leading to advancement in the allied health professions and occupations. The courses, each three credits, are offered on Monday, Wednesday and Friday from 4:30 to 6:30 p.m. All classes are conducted in Jefferson facilities.

censure lifted

In 1956 the American Association of University Professors put Jefferson Medical College on its censureship list because of certain allegations made in regard to dissociation practices and academic freedom at Jefferson. After prolonged negotiations between Jefferson and officers of the AAUP, misunderstandings were ironed out. When Jefferson's Board of Trustees adopted an appointment and dissociation document which met the Association's objectives, its censureship was lifted on June 17, 1968.

appointments

Arthur R. Owens has been appointed Registrar at Jefferson Medical College. Mr. Owens formerly held this position at the University of Pennsylvania. A native of Scranton, Pennsylvania, he was graduated from Pennsylvania State University and attended the Wharton School of the University of Pennsylvania. He is Vice President of the Middle States Association and a member of the American Association of Collegiate Registrars and Admission Officers.

A new post, Hospital Assistant Director for Business, has been filled by the promotion of Robert C. Loper, Jr., from Business Manager. Mr. Loper is an alumnus of the University of Pennsylvania Wharton School. He is serving his fourth year as a Director of the Philadelphia Chapter of the American Association of Hospital Accountants.

congressional plaudits

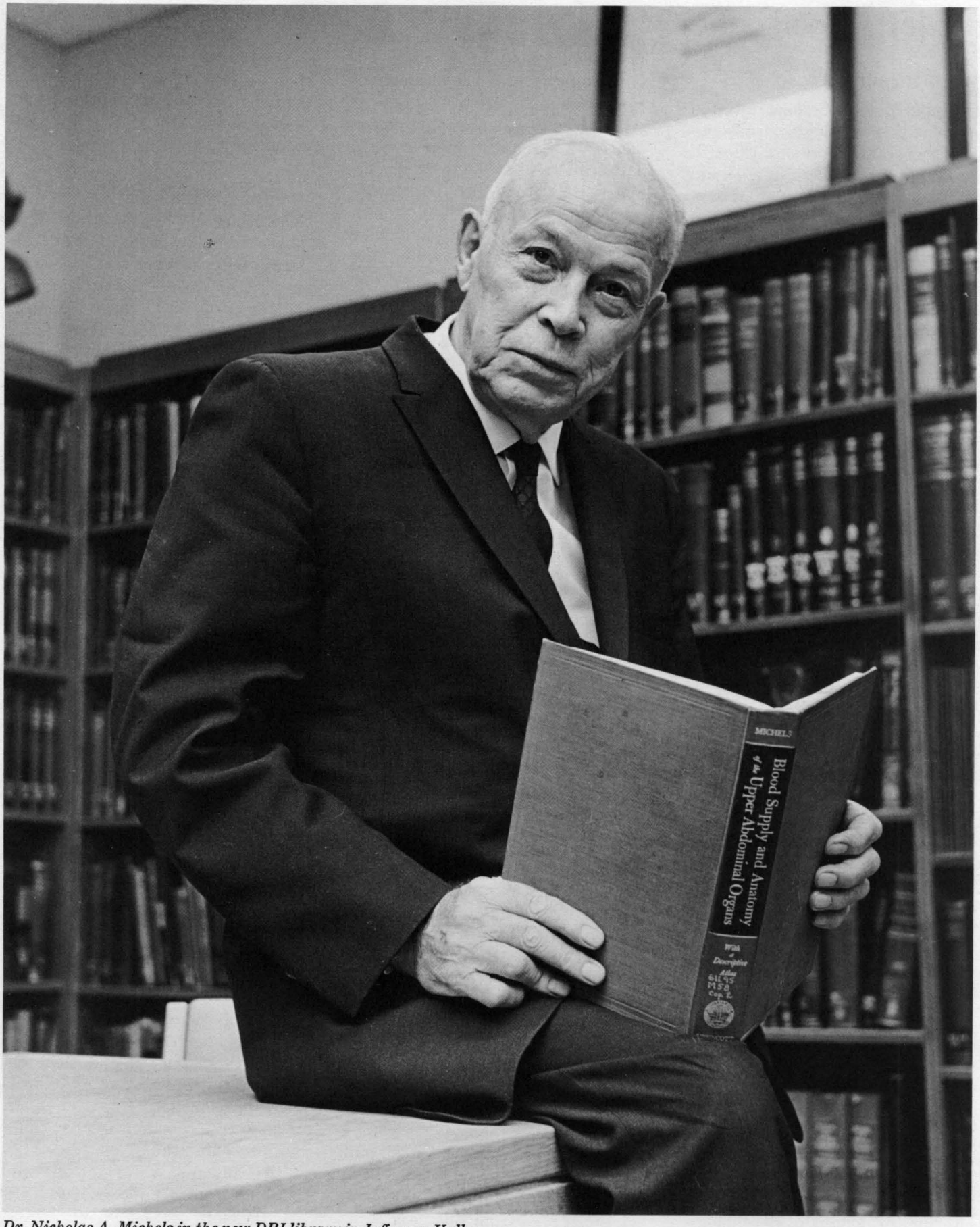
The House of Representatives of the Commonwealth of Pennsylvania has passed a resolution citing Jefferson Medical College and Hospital on its "long and distinguished record of public service." Representatives William J. Lederer and Roland Greenfield introduced the resolution. Representative Lederer presented a copy of the citation to Dr. Peter A. Herbut, Jefferson President, in a ceremony in Dr. Herbut's office on June 20.

miss gray

Alumni of the last thirty-three years need no introduction to the lady who sat behind the cashier's desk in the College: Miss Marian L. Gray. Miss Gray was honored guest at a luncheon and reception on September 26. The occasion: her retirement.

The day's festivities got under way with a luncheon at the Union League hosted by Dean William F. Kellow. Later in the afternoon there was a reception in Jefferson Hall. Friends and colleagues gathered to wish her well and say thank you for many years of service. There was an engraved silver tray to remind her of Jefferson associations. From the Alumni (she served as secretary to the alumni treasurer and handled all the organization's money matters) there was a gold clock inscribed with her name and words of appreciation. Dr. Elmer H. Funk, Jr., President of the Alumni, presented the token.

Arrangements for the tea and reception were made by Miss Ruth A. Jackson.



Dr. Nicholas A. Michels in the new DBI library in Jefferson Hall

profiles . . . . . .

Michels: the name is a familiar one at Jefferson, and so is the face, which looks a good ten years younger than its seventy-seven years. Now Professor of Anatomy, Emeritus, Dr. Nicholas A. Michels has taught five thousand Jefferson freshmen "the fundamental things" a student of medicine must know—the principles of anatomy. He did the job well, as his students have been the first to recognize. They did so in 1958 by choosing him as subject of the senior class portrait presentation. The selection of Dr. Michels as recipient of a Lindback Foundation Award for Distinguished Teaching in 1962 supported the students' evaluation.

Being an effective teacher means a lot to Dr. Michels. In fact, if he had to make a choice between teaching and research, it would be teaching. "The opportunity to be a very big factor in guiding the student's life is its particular appeal to me," he says. Dr. Michels enjoys the same sense of involvement in his subject matter. "Anatomy is the eye of medicine and it always will be. Even though the day for specialization has come, a medical student can never forget the fundamental subjects he learns in freshman year, such as anatomy."

Dr. Michels found his way into the "eye of medicine" while studying for his master's degree under Dr. Hal Downey at the University of Minnesota. For further training he went to the very origins of anatomy and histology, the University of Louvain in Belgium, where Vesalius himself was once a student. Dr. Michels received his doctorate degree there (maxima cum laude) in 1922, under Dr. Victor Gregoire. From Louvain he went to the Sorbonne University in Paris, then to Siena University in Italy to study under Dr. Adolf Ferrata. On Dr. Michels' return to the United States, he chose the opportunity to work at Chicago University with Dr. Alexander Maximow, the recently arrived Russian histologist and hematologist. Other appointments followed Chicago: Mount Sinai Hospital, Saint Louis Medical School, Creighton University Medical School. At the invitation of Dr. J. Parsons Schaeffer, he began his Jefferson association in 1929 as Associate Professor of Anatomy. In 1938 he published Section IV of Downey's *Handbook of Hematology,* the only classical reference work on the subject "Mast Cells." It remained so for twenty-five years. Dr. Michels' research on the mast cell proved it to be a living and not a degenerating cell from fish to man. The importance of his discovery was not recognized until 1962. The occasion then was the international congress on mast cells held in New York City. Dr. Michels was invited and specially honored for his pioneering research in the field. His "Mast Cells" was reprinted as Section I of the monograph on this subject compiled by the New York Academy of Science in 1963.

Since 1936 his investigative work has dealt with the varied blood supply of the abdominal organs. After two hundred dissections, he published the first descriptive atlas on "Blood Supply and Anatomy of the Upper Abdominal Organs." Again an author, Dr. Michels wrote the first history of the American Association of Anatomists for its thirty-eighth annual session held at Jefferson in 1955.

Dr. Michels is still active in the laboratory and the classroom. His most recent research is reported in a forthcoming new book, co-authored with Nebesar, Pollard and Kornblith, entitled *Celiac and Superior Mesenteric Arteries: A Correlation of Angiograms with Anatomic Dissections.* The study involved three hundred cadaver dissections and proves that "you can now see the same things in an arteriogram as in a dissection." The stimulation that Dr. Michels finds in anatomy has never abated. "Anatomy is both microscopic and macroscopic." Were the career choice to be made again, he is certain it would be the same. Experiences along the way have been numerous and memorable. "I can't even single out any one that was most memorable."

Relaxation for Dr. Michels since 1937 has meant taking care of his centuries old farm in Hatfield, Pennsylvania, where his two children, Adelle and Harvey, were raised and where he now enjoys the visits of his four grandsons. Jefferson students and faculty have often enjoyed the farm, too, as Dr. Michels' guests.

Familiar as the name and the face is the scene of the man dressed in the red robes and black beret of a University of Louvain degree at an academic procession. It might be opening exercises, where the hands extended to him along the way express better than words the warmth of feeling colleagues and students have for the Professor of Anatomy, Emeritus, Dr. Nicholas A. Michels.

faculty notes

administration

Dr. John W. Goldschmidt, Dean of the School of Allied Health Sciences, on August 1 became President of the Heart Association of Southeastern Pennsylvania. Dr. Goldschmidt completes the unexpired term of Dr. William L. Winters, Jr., who accepted an appointment outside the state.

anatomy

Dr. James O. Brown, Associate Professor of Anatomy, presented a paper titled "Studies on the Cerebral Arterial Circles of Mink" at the Eighty-First Annual Session of the American Association of Anatomists, held in New Orleans, Louisiana, last spring.

Dr. Charles G. Rosa, Associate Professor of Anatomy, attended the same meeting and presented the paper, "The Electron Cytochemical Demonstration of Succinic Dehydrogenase in Rodent Sperm without Heavy Metal Postfixation." On September 16, Dr. Rosa returned to New Orleans to deliver a report, "Periodate Treatment and 'All-or-None' Dehydrogenase Staining Phenomena," at the Annual Meeting of the Electron Microscopy Society of America.

anesthesiology

Dr. Jay J. Jacoby, Professor of Anesthesiology and Head of the Department, was in London during September to present his paper, "The New Approach to Anesthesia," to the World Congress of Anesthesiologists meeting.

Dr. Robert T. McSherry, Assistant Professor of Anesthesia, was Visiting Professor at the University of Oklahoma Medical School in Oklahoma City on August 19 and 20.

medicine

Dr. Sandor S. Shapiro, Professor of Medicine, reported on his research to the National Hemophilia Foundation Symposium in New York City during August, and to the Twelfth Congress of the International Society of Hematology, also in New York, on September 2. Dr. Shapiro is now serving on the editorial board of *Blood,* the journal of hematology.

Dr. Farid I. Haurani, Associate Professor of Medicine, is on sabbatical leave from Jefferson for ten months until July 1969. Part of this leave will be spent teaching at the American University of Beirut in Lebanon, as Visiting Professor of Medicine. For the rest of the period he will be at the College de France in Paris, doing research on the reticuloendothelial system and erythropoiesis.

obstetrics and gynecology

Dr. George A. Hahn, Professor of Obstetrics and Gynecology, gave a presentation on "Cancer of the Ovary" before the Seventh Annual Tumor Symposium of the Pennsylvania Osteopathic Association, June 22, at the Marriott Motor Hotel in suburban Philadelphia.

Dr. Warren R. Lang, Professor of Obstetrics and Gynecology, attended the 22nd Annual Rocky Mountain Cancer Conference held in Denver, Colorado, July 19 and 20. He delivered a paper on "The Outpatient Diagnosis of Cervical Carcinoma" and participated in three symposia.

pathology

Dr. Leonard E. Reisman has been appointed to the dual post of Professor of Pathology and Associate Professor of Pediatrics at Jefferson. He comes from the University of Louisville School of Medicine, where he was Associate Professor of Pediatrics and Associate in Pathology, Microbiology and Medicine. He received his A. B. degree from Harvard and his M. D. from New York University School of Medicine. While at Louisville, Dr. Reisman was Director of the Sections on Pediatric Hematology and Medical Genetics, Chief of the Genetic Counseling Unit of the Child Evaluation Center, Associate Director of the Birth Defects Clinic, and Consultant to the Kentucky Department of Mental Health. He is regarded as an authority in genetic counseling and has published forty-one papers on chromosomal aberrations. At Jefferson, he is Supervisor of the Clinical Hematology Laboratories.

Dr. Theodore T. Tsaltas, Professor of Pathology, presented a paper on "The Pathophysiology and Treatment of Weber-Christian Disease" at the last meeting of the Association of American Pathologists and Bacteriologists, held in Chicago. The paper was judged as the outstanding one presented at this meeting. It was the result of several years of work in which Dr. Tsaltas cooperated with Dr. Robert I. Wise, Professor of Medicine and Head of the Department, and Dr. William C. Frayer, Professor of Ophthalmology.

Dr. Angelina M. Fabrizio, Assistant Professor of Pathology, has been appointed consultant to the Department of Surgical Research, Children's Hospital, Boston, Massachusetts.

pediatrics

Dr. Robert L. Brent, Professor of Pediatrics and Head of the Department, was appointed to the Scientific Program Committee of the Third International Conference on "Congenital Malformations" at the organizational meeting held in Baltimore, Maryland, in May. This conference will be held at The Hague, Netherlands, in the fall of 1969. Also, Dr. Brent was elected recently as President of the Philadelphia Chapter of the National Foundation for 1968.

Dr. Herbert C. Mansmann, Jr., has been appointed Professor of Pediatrics and Associate Professor of Medicine. Dr. Mansmann was formerly with the University of Pittsburgh School of Medicine where he was Clinical Assistant Professor of Pediatrics. He received his B. S. degree there and his M. D., from Jefferson in 1951. Specializing in allergy, Dr. Mansmann has done research at Massachusetts General Hospital, Harvard University, New York University, the University of Pittsburgh School of Medicine and Children's Hospital of Pittsburgh. He was Director of the Allergy Residency Training Program at Children's. Dr. Mansmann is a past President of the Pennsylvania Allergy Association.

Dr. Gary G. Carpenter has joined the Jefferson faculty as Associate Professor of Pediatrics. Dr. Carpenter is a Jefferson alumnus, class of 1960, with a B. S. from Rutgers University. He comes from St. Christopher's Hospital for Children where he was Assistant Professor of Pediatrics and Assistant Program Director of the Clinical Research Center. He held a training fellowship in metabolism and amino acids from 1961 to 1964 at St. Christopher's in Philadelphia. At Jefferson he is Director of the Pediatric Endocrine and Metabolic Clinic, Consulting Pediatric Endocrinologist, and a member of the Genetic Counseling Clinic.

Dr. Irving J. Olshin, Associate Professor of Pediatrics, was Visiting Professor to the Wilmington Medical School in Wilmington, Delaware, during the second week of October.

Dr. Peter S. Leibert has been appointed Assistant Professor, both of Pediatrics and of Surgery, at Jefferson. Dr. Leibert is a graduate of Princeton University and Harvard Medical School. He is known for his original research in experimental transplantation of the larynx.

Dr. Elias Schwartz, Assistant Professor of Pediatrics, in September spoke at the New York Academy of Science's Second International Conference, discussing "Problems of Cooley's Anemia."

pharmacology

Dr. John P. Capelli, Assistant Professor of Pharmacology, has been appointed Director of the Division of Clinical Pharmacology and Therapeutics at Jefferson Hospital. The newly created division is charged with pursuing research in the area of drug mechanisms and in controlled clinical trials of promising new agents. Dr. Capelli is a 1962 Jefferson graduate, and also took a residency and a research training program here. In his research he has developed techniques for isolation and study of renin, and demonstrated for the first time in the human that the uterus is capable of making this hormone.

preventive medicine

Dr. C. Earl Albrecht, Professor of Preventive Medicine, was a speaker at the Thirteenth Annual International Conference on Spiritual Healing, held in Philadelphia during September. The conference was sponsored by the worldwide Order of St. Luke the Physician.

psychiatry

Dr. Claus B. Bahnson, Associate Professor of Psychiatry, was in Sweden during July to participate in research conferences at the Karolinska Instituttet, Stockholm, where the subject was "Personality Dynamics and Immunology in Cancer," and at the University of Lund in Lund, where the conferences were on "The Epidemiology of Mental Illness." In Copenhagen, Denmark, on the same trip he delivered lectures on "Personality Aspects of Mental Disability" and "Family Therapy" at the Danish Social Research Institute.

The paper, "Gaze Direction as a Factor in the Accurate Judgment of Nonverbal Expressions of Affect," by Dr. Richard Winkelmayer, Instructor in Psychiatry, Dr. Edward Gottheil and Dr. Alfonso Paredes, Associate Professors of Psychiatry, and Dr. Ralph V. Exline, Research Associate in Psychiatry, was presented at the annual meeting of the American Psychological Association, held August 31 to September 4 in San Francisco.

Mr. Walter H. Mikulich, Research Associate in Psychiatry, has been appointed Executive Director of the Northeast Mental Health Clinic.

surgery

Dr. Charles Fineberg, Associate Professor of Clinical Surgery, has been appointed Director of Surgery at the Samuel Daroff Division of the Albert Einstein Medical Center. He previously had been Director of Thoracic and Cardiovascular Surgery there. In his new position, Dr. Fineberg is in charge of all administrative, medical and research activities of the entire Department of Surgery and its subspecialties.

urology

Dr. Paul D. Zimskind, Professor of Urology and Head of the Department, discussed "Renal Vascular Hypertension" and conducted teaching rounds at the Beilinson Hospital of the Tel Aviv University School of Medicine in Israel on July 29. In San Francisco on June 18, he presented a paper on "Observations on Reflux in Children Using Simultaneous Recordings of Cine Images and Intraluminal Pressure in the Urinary Tract" at the American Medical Association Research Forum.

PROMOTIONS, APPOINTMENTS AND RESIGNATIONS FOR 1967-1968

PROMOTIONS

Professors

HAROLD F. CHASE, B.S., M.D.
from Instructor in Anesthesiology
to Professor of Clinical and Research Anesthesiology

KAY ADRIAN O. ELLEM, B.S., M.B.B.S., PH.D.
from Associate Professor of Pathology
to Professor of Pathology

RICHARD A. FIELD, A.B., M.D.
from Associate Professor of Medicine
to Professor of Medicine

DANIEL LIEBERMAN, A.B., M.D.
from Associate Professor of Psychiatry (Community Mental Health)
to Professor of Psychiatry (Community Mental Health)

ROLAND W. MANTHEI, PH.B., B.S., PH.D.
from Associate Professor of Pharmacology
to Professor of Pharmacology

ALBERT E. O'HARA, B.S., M.D.
from Associate Professor of Radiology
to Professor of Radiology

JOHN J. O'KEEFE, B.S., M.D.
from Clinical Professor of Otolaryngology
to Professor of Clinical Otolaryngology

IRVING JOEL OLSHIN, B.A., M.D.
from Associate Professor of Pediatrics
to Professor of Pediatrics

EDWIN W. SHEARBURN, A.B., M.D., M.S.
from Assistant Professor of Clinical Surgery
to Professor of Surgery

MARTHA E. SOUTHARD, B.S., M.D.
from Associate Professor of Radiology
to Professor of Radiology

Associate Professors

WILLIAM H. BALTZELL, A.B., M.D.
from Assistant Professor of Clinical Otolaryngology
to Associate Professor of Clinical Otolaryngology

THOMAS BEHRENDT, M.D.
from Assistant Professor of Ophthalmology
to Associate Professor of Ophthalmology

EDWARD RICHARD BURKA, A.B., M.D.
from Assistant Professor of Medicine
to Associate Professor of Medicine

James Edward Clark, A.B., M.D.
from Associate Professor of Medicine
to Associate Professor of Clinical Medicine

John W. Cox, M.D., PH.D.
from Assistant Professor of Medicine
to Associate Professor of Medicine

JOHN J. DETUERK, B.S., M.D.
from Assistant Professor of Clinical Surgery
to Associate Professor of Clinical Surgery

DONALD B. DOEMLING, B.S., M.S., PH.D.
from Assistant Professor of Physiology
to Associate Professor of Physiology

CHARLES FINEBERG, B.S., M.D.
from Assistant Professor of Surgery
to Associate Professor of Surgery

ROBERT S. GARBER, B.S., M.D.
from Assistant Professor of Clinical Psychiatry
to Visiting Associate Professor of Psychiatry

GEORGE F. GOWEN, B.A., M.D.
from Assistant Professor of Surgery
to Associate Professor of Clinical Surgery

EDWIN D. HARRINGTON, A.B., M.A., M.D., M.P.H.
from Assistant Professor of Pediatrics
to Associate Professor of Pediatrics

FARID I. HAURANI, B.A., M.D.
from Assistant Professor of Medicine
to Associate Professor of Medicine

JOHN J. MCKEOWN, B.S., M.D.
from Assistant Professor of Clinical Surgery
to Associate Professor of Surgery

LOUIS MERVES, B.S., M.D.
from Assistant Professor of Clinical Medicine
to Associate Professor of Clinical Medicine

T. BURRITT MERVINE, B.S., M.D.
from Assistant Professor of Clinical Surgery
to Associate Professor of Clinical Surgery

BERNARD J. MILLER, B.S., M.D.
from Assistant Professor of Anatomy (Applied Anatomy)
to Associate Professor of Anatomy (Applied Anatomy)

LOUIS PIERUCCI, JR., B.S., M.D.
from Assistant Professor of Surgery
to Associate Professor of Surgery

ELIAS SCHWARTZ, A.B., M.D.
from Assistant Professor of Pediatrics
to Associate Professor of Pediatrics

CHARLES W. SEMISCH, III, B.A., M.D.
from Assistant Professor of Medicine
to Associate Professor of Clinical Medicine

SANDOR S. SHAPIRO, A.B., M.D.
from Assistant Professor of Medicine
to Associate Professor of Medicine

GEORGE P. STUDZINSKI, B.S., M.B., CH.B., PH.D.
from Assistant Professor of Pathology
to Associate Professor of Pathology

WILLIAM H. WHITELEY, III, A.B., M.D.
from Assistant Professor of Clinical Surgery (Neurosurgery)
to Associate Professor of Clinical Surgery (Neurosurgery)

Assistant Professors

RALPH A. CARABASI, B.S., M.D.
from Associate in Medicine
to Assistant Professor of Clinical Medicine

LESLIE G. CLARK, B.S., M.S., PH.D.
from Instructor in Biochemistry
to Assistant Professor of Biochemistry

IRWIN M. FREUNDLICH, A.B., M.D.
from Associate in Radiology
to Assistant Professor of Radiology

ELMER H. FUNK, JR., B.S., M.D.
from Associate in Clinical Medicine
to Assistant Professor of Clinical Medicine

RUTH P. GOTTLIEB, B.A., M.D.
from Associate in Pediatrics
to Assistant Professor of Clinical Pediatrics

EDWARD A. JAEGER, A.B., M.D.
from Associate in Ophthalmology
to Assistant Professor of Ophthalmology

EUGENE H. KAIN, B.S., M.D.
from Instructor in Surgery
to Assistant Professor of Clinical Surgery

PAUL A. LIBERTI, A.B., M.S., PH.D.
from Instructor in Biochemistry
to Assistant Professor of Biochemistry

WILLIAM BOSLEY MANGES, B.A., M.D.
from Associate in Clinical Surgery
to Assistant Professor of Clinical Surgery

GERALD MARKS, M.D.
from Associate in Clinical Surgery
to Assistant Professor of Clinical Surgery

MORTON GERALD MURDOCK, B.A., M.D.
from Associate in Radiology
to Assistant Professor of Radiology

WALTER B. OMANS, B.S., M.D.
from Associate in Pediatrics
to Assistant Professor of Pediatrics

RICHARD T. PADULA, B.S., M.D.
from Associate in Surgery
to Assistant Professor of Surgery
RICHARD C. PUTNAM, A.B., M.D.
from Associate in Clinical Medicine
to Assistant Professor of Clinical Medicine
LEONARD M. ROSENFELD, A.B., PH.D.
from Instructor in Physiology
to Assistant Professor of Physiology
RICHARD H. ROTHMAN, B.A., M.D., PH.D.
from Associate in Orthopedic Surgery
to Assistant Professor of Orthopedic Surgery
SAMUEL E. RYNES, A.B., M.D.
from Associate in Clinical Medicine
to Assistant Professor of Clinical Medicine
JOHN RAYMOND SHEA, JR., B.S., M.SC., PH.D.
from Instructor in Anatomy
to Assistant Professor of Anatomy
MARION J. SIEGMAN, B.A., PH.D.
from Instructor in Physiology
to Assistant Professor of Physiology
MILES H. SIGLER, B.A., M.D.
from Associate in Medicine
to Assistant Professor of Clinical Medicine
HELGA MOEKSI SULD, PH.D.
from Instructor in Biochemistry
to Assistant Professor of Biochemistry
PATRICIA J. WALSH, B.S., M.D., PH.D.
from Instructor in Biochemistry
to Assistant Professor of Biochemistry
LESLIE WIENER, B.S., M.D.
from Associate in Medicine
to Assistant Professor of Medicine

Associates

BENJAMIN BACHARACH, B.S., M.D.
from Instructor in Surgery
to Associate in Surgery
WILLIAM JAMES CAMPBELL, A.B., M.D.
from Assistant in Dermatology
to Associate in Dermatology
JOHN P. CAPELLI, B.S., M.D.
from Instructor in Medicine
to Associate in Medicine
HERBERT J. DEUTSCH, B.S., M.D.
from Instructor in Otolaryngology
to Associate in Otolaryngology
JOHN B. FRANKLIN, A.B., M.D.
from Instructor in Obstetrics and Gynecology
to Associate in Obstetrics and Gynecology
ERICH J. FREIMUTH, B.S., M.D.
from Instructor in Neurology
to Associate in Neurolgy
MICHAEL A. MANKO, A.B., M.D.
from Instructor in Medicine
to Associate in Clinical Medicine
BERNARD J. MILLER, B.S., M.D.
from Assistant in Surgery
to Associate in Surgery
RANDALL S. NADEN, JR., A.B., M.D.
from Instructor in Medicine
to Associate in Clinical Medicine
JOHN R. PATTERSON, B.A., M.D.
from Instructor in Medicine
to Associate in Clinical Medicine
JAMES D. RIPEPI, B.S., M.D.
from Instructor in Neurology
to Associate in Neurology
JOE ED WHETSELL, M.D.
from Instructor in Medicine
to Associate in Medicine

Instructors

MARIUS WALKER ALLEN, B.S., M.D.
from Assistant in Surgery
to Instructor in Surgery
PETER AMADIO, JR., B.S., M.D.
from Assistant in Medicine
to Instructor in Medicine
MARTIN T. BRENNAN, B.S., M.D.
from Assistant in Otolaryngology
to Instructor in Otolaryngology
ROY HOLMES HAND, B.S., M.D.
from Assistant in Surgery
to Instructor in Surgery
NORTON HERING, B.S., M.D.
from Assistant in Surgery
to Instructor in Surgery
PAUL W. JACKSON, B.A., M.D.
from Assistant in Otolaryngology
to Instructor in Otolaryngology
MARVIN E. JAFFE, B.A., M.D.
from Assistant in Neurology
to Instructor in Neurology
WILLIAM THOMAS LEMMON, JR., A.B., M.D.
from Assistant in Surgery
to Instructor in Surgery
JOSEPH LEO MAGRATH, JR., A.B., M.D.
from Assistant in Surgery
to Instructor in Surgery
ANNA MARIE AGNES SESSO, B.A., M.D.
from Assistant in Pediatrics
to Instructor in Pediatrics
DONALD Z. SOKOL, A.B., M.D.
from Assistant in Otolaryngology
to Instructor in Otolaryngology
JERRY STIFFEL, B.A., M.D.
from Assistant in Surgery
to Instructor in Surgery

APPOINTMENTS

Head of Department

RUSSELL W. SCHAEDLER, B.S., M.D.
Professor of Microbiology and Head of the Department

Professors

RICHARD G. BERRY, B.A., M.D.
Professor of Pathology (Neuropathology)
FRANK DAVIS GRAY, JR., B.S., M.D.
Professor of Medicine
LEONARD J. GRAZIANI, A.B., M.D.
Professor of Neurology and Professor of Pediatrics

Visiting Professors

JOSEPH W. SPELMAN, B.S., M.D.
Visiting Professor of Pathology
GUNNAR WILLER VESTBY, M.D.
Visiting Professor of Radiology

Associate Professors

WILLIAM P. CAMP, A.B., M.D.
Associate Professor of Psychiatry
SERGE DUCKETT, B.A., M.D., PH.D.
Associate Professor of Neurology (Pathology) and Associate Professor of Pathology (Neurology)
AUGUST W. EPPLE, PH.D.
Associate Professor of Anatomy
FRIEDA GERSH GRAY, A.B., M.D.
Associate Professor of Medicine
ARTHUR E. GREENE, A.B., B.S., M.S., D.SC.
Associate Professor of Microbiology
WILLIAM LEIGHTON HOLMES, B.S.A., M.D., PH.D.
Associate Professor of Biochemistry
GEORGE JOHN HORNER, M.B., B.S. (=M.D.)
Associate Professor of Medicine
ELI MARCOVITZ, A.B., M.D.
Associate Professor of Psychiatry (Psychoanalysis)
SIGMUND H. NADLER, B.S., M.D.
Associate Professor of Surgery
FREDERIC G. REARDON, A.B., M.D.
Associate Professor of Clinical Pediatrics
LEONARD E. REISMAN, A.B., M.D.
Associate Professor of Pathology (Pediatrics) and Associate Professor of Pediatrics (Pathology)
ROBERT W. SIMPSON, B.S., SC.M., PH.D.
Associate Professor of Microbiology
HERBERT SPRINCE, B.S., M.A., PH.D.
Associate Professor of Psychiatry (Behavioral Metabolism) and Associate Professor of Pharmacology
NAGALINGAM SUNTHARALINGAM, PH.D.
Associate Professor of Radiology (Medical Physics)
NANCY L. TROTTER, A.B., SC.M., PH.D.
Associate Professor of Anatomy

Assistant Professors

WALTER MICHAEL BORTZ, II, B.S., M.D.
Assistant Professor of Medicine
JOHN P. CAPELLI, B.S., M.D.
Assistant Professor of Pharmacology
FRANKLYN R. CLARKE, B.S., M.S., M.D.
Assistant Professor of Clinical Psychiatry
MORRIS IVKER, B.S., M.D.
Assistant Professor of Radiology
ROBERT K. JONES, B.S., M.D.
Assistant Professor of Clinical Surgery (Neurosurgery)
KOSON KURODA, A.A., B.A., M.D.
Assistant Professor of Radiology
PETER S. LIEBERT, A.B., M.D.
Assistant Professor of Surgery (Pediatric Surgery) and Assistant Professor of Pediatrics
CARMINE F. MERRYMAN, B.S., B.A., M.D.
Assistant Professor of Biochemistry
ARTHUR PATCHEFSKY, M.D.
Assistant Professor of Pathology
DONALD M. QUALLS, B.S., M.D.
Assistant Professor of Clinical Orthopedic Surgery
EILEEN L. RANDALL, B.S., M.S., PH.D.
Assistant Professor of Pathology (Microbiology)
HERMAN ROSENBLUM, B.A., M.D.
Assistant Professor of Pediatrics
RICHARD SANDERS, B.S., M.A., PH.D.
Assistant Professor of Psychiatry (Psychology)
NORMAN J. WINSTON, B.A., M.D.
Assistant Professor of Clinical Radiology

Visiting Lecturers

MARVIN E. ARONSON, M.D.
Visiting Lecturer in Pathology (Forensic)
HALBERT FILLINGER, B.S., M.D.
Visiting Lecturer in Pathology (Forensic)
LOV KUMAR SARIN, B.S., M.B.B.S.
Visiting Lecturer in Ophthalmology
RAYMOND J. VIVACQUA, B.A., M.D.
Visiting Lecturer in Medicine

Associates

RONALD E. COHN, B.S., M.D.
Associate in Clinical Medicine
MICHAEL FRANCIS DEVINE, B.S., M.D.
Associate in Clinical Medicine
LLOYD B. HARRISON, JR., A.B., M.D.
Associate in Clinical Otolaryngology
MILDRED L. MATHEWS, B.S., M.D.
Associate in Radiology (Radiation Therapy)
EDWARD D. MCLAUGHLIN, B.S., M.D.
Associate in Surgery
MISAO TAKEDO, M.B. (=M.D.)
Associate in Pathology
DAVID A. YAZDAN, M.D.
Associate in Surgery (Neurosurgery)

Research Associates

ANNE STEELE FAUST, B.A., M.S.
Research Associate in Biochemistry
JAE NAM KIM, PH.D., M.D.
Research Associate in Radiology
JOHN J. KONIKOFF, B.S., M.E.
Research Associate in Physiology
WALDIR MAYMONE, M.D.
Research Associate in Radiology
WALTER W. MIKULICH, B.A., M.S.W.
Research Associate in Psychiatry
DEANNE PARIS, B.S., M.A.
Research Associate in Otolaryngology (Audiology)
PETER DURE-SMITH, B.A., M.B., M.CH.
Research Associate in Radiology
CLAUDE H. WENNER, B.S. (E.E.)
Research Associate in Otolaryngology (Bioacoustics)

Instructors

RICHARD P. ALBERTSON, B.S., M.D.
Instructor in Anesthesiology
PETER HARRY ARGER, A.B., M.D.
Instructor in Radiology
JON BJORNSON, B.A., M.D.
Instructor in Psychiatry
MRS. CAMERON CATLIN BOEHME, B.S., PH.D.
Instructor in Anatomy
WILLIAM J. BRENNAN, JR., A.B., M.D.
Instructor in Radiology
JERRY E. CARPENTER, B.A., B.D.
Instructor in Psychiatry
JOHN JUWEI CHI'IH, B.A., M.S., PH.D.
Instructor in Biochemistry
BETTIE WEST CLAY, B.S., M.D.
Instructor in Medicine
DAVID COHEN, B.A., M.S., PH.D.
Instructor in Psychiatry (Psychology)
RUPERTO F. COLMENARES, B.S., M.D.
Instructor in Pathology
JOHN C. COTTRELL, B.S., M.D.
Instructor in Pathology
CIPRIANO A. ELLOSO, A.A., M.D.
Instructor in Pathology
DANIEL T. ERHARD, B.S., M.D.
Instructor in Anesthesiology
JOHN MAJOR FENLIN, JR., B.A., M.D.
Instructor in Orthopedic Surgery
JOHN RONALD FICKE, B.S., M.D.
Instructor in Medicine
JUDITH GOLDSTEIN, B.S., M.A.
Instructor in Otolaryngology (Audiology)
HAZEL I. HOLST, A.B., M.D.
Instructor in Surgery (Plastic Surgery)
J. LEONARD IVINS, B.A., M.S., M.D.
Instructor in Psychiatry
STANLEY S. KLINE, A.B., M.S., M.D.
Instructor in Obstetrics and Gynecology
ELEANOR O. LEISE, B.S., M.D.
Instructor in Obstetrics and Gynecology
JAMES P. MARVEL, JR., B.A., M.D.
Instructor in Orthopedic Surgery
LOUIS VINCENT MILLER, B.S., M.D.
Instructor in Obstetrics and Gynecology
NEIL MILLER, B.S.M.E., M.S.B.E., PH.D.
Instructor in Surgery
GERALD ODSTRCHEL, B.S., M.S., PH.D.
Instructor in Biochemistry
NORMAN RICHARD ROBINSON, B.S., M.D.
Instructor in Otolaryngology
EMILIO A. RONCACE, A.B., M.D.
Instructor in Otolaryngology
WILLIAM R. ROUSSEAU, B.S., M.D.
Instructor in Anesthesiology
ZIYAD W. SAWWAF, P.C.B., M.D.
Instructor in Radiology
MARILYN SCHOTLAND, A.B., M.D.
Instructor in Pediatrics
JOHN E. STAMBAUGH, JR., B.S., M.D., PH.D.
Instructor in Pharmacology
NATALIO STEIN, M.D.
Instructor in Anesthesiology
WILLIAM G. STEWART, JR., A.B., M.D.
Instructor in Orthopedic Surgery
PETER F. STONIER, B.A., M.D.
Instructor in Pathology
ULYSSES E. WATSON, B.S., M.D.
Instructor in Psychiatry
RUTH TUMEN WILF, B.A., M.A., PH.D.
Instructor in Obstetrics and Gynecology
VASANT G. YADAV, B.S., M.B., B.S. (=M.D.)
Instructor in Pediatrics
MORRIS L. YODER, JR., B.S., M.D.
Instructor in Medicine
KENNETH ZEGART, B.S., M.D.
Instructor in Obstetrics and Gynecology

Assistants

FRANK LEE BARHAM, M.D.
Assistant in Medicine
BRUCE ROBERT BATCHELOR, B.A., M.D.
Assistant in Medicine

GEORGE J. BRODMERKEL, JR., B.S., M.D.
Assistant in Medicine
ERWIN LEWIS BURKE, M.D., C.M.
Assistant in Medicine
JOHN EDMUND CUNNINGHAM, JR., B.S., M.D.
Assistant in Medicine
JOSEPH C. FLANAGAN, A.B., M.D.
Assistant in Ophthalmology
DAVID J. GARCIA, M.D.
Assistant in Surgery
MARVIN GROSSMAN, B.A., M.D.
Assistant in Medicine
FRED M. JACOBS, A.B., M.D.
Assistant in Medicine
KENNETH M. KRON, B.S., M.D.
Assistant in Psychiatry
DOMINICK N. PASQUALE, B.A., M.D.
Assistant in Medicine
JOEL RINGOLD, B.A., M.D.
Assistant in Medicine
KEITH A. ROBERTS, A.B., M.D.
Assistant in Neurology
STANFORD M. STEINBERG, B.S., M.D.
Assistant in Medicine
J. JORDAN STORLAZZI, JR., B.S., M.D.
Assistant in Pediatrics
EDWARD A. TEITELMAN, A.B., M.D.
Assistant in Psychiatry
CHARLES CURTIS THORNTON, B.A., M.A., PH.D.
Assistant in Psychiatry
THEODORE W. WASSERMAN, B.S., M.D.
Assistant in Psychiatry
DONALD J. WEXLIN, B.S., M.D.
Assistant in Medicine
J. THOMAS WILLIAMS, JR., A.B., M.D.
Assistant in Orthopedic Surgery

Teaching Fellows

DENNIS ALAN FRIED, B.S.
Teaching Fellow in Anatomy
ALLEN R. GORDON, B.S.
Teaching Fellow in Physiology
JOAN C. LAMBERT, A.B., M.S.
Teaching Fellow in Physiology
THUMANOON YONGCHAIYUDT, M.D.
Nathan Lewis Hatfield Fellow in Urology (for one year)

CHANGE OF STATUS

JOHN F. BAYLEY, JR., B.A., M.D.
from Associate Professor of Clinical Pediatrics
to Associate Professor of Pediatrics
RUTH P. GOTTLIEB, B.A., M.D.
from Assistant Professor of Clinical Pediatrics
to Assistant Professor of Pediatrics
HENRY A. KANE, A.B., M.D.
from Assistant Professor of Clinical Pediatrics
to Assistant Professor of Pediatrics
MORTON ROSENBERG, B.A., M.D.
from Assistant Professor of Clinical Pediatrics
to Assistant Professor of Pediatrics
MARY LOUISE SOENTGEN, B.A., M.A., M.D.
from Assistant Professor of Clinical Pediatrics
to Assistant Professor of Pediatrics

DEATHS

EDWARD F CORSON, M.D.
12/2/67
Professor of Dermatology, Emeritus
JOHN E. DAVIS, B.S., M.D.
5/2/68
Professor of Psychiatry
JOHN H. DUGGER, A.B., M.D.
2/3/68
Associate Professor of Obstetrics and Gynecology (Honorary Member)
WILLIAM HARVEY PERKINS, M.D., SC.D., LL.D.
10/22/67
Professor of Preventive Medicine, Emeritus
ARNO E. TOWN, B.S., M.D., M.SC.
12/12/67
Professor of Ophthalmology, Emeritus
CREIGHTON H. TURNER, M.D.
3/29/68
Associate Professor of Medicine (Honorary Member)
ROBERT WAELDER, PH.D.
9/28/67
Professor of Psychiatry (Psychoanalysis)

RESIGNATIONS

JOSEPH ADLESTEIN, A.B., M.D.
Assistant Professor of Clinical Psychiatry
ERNEST N. ALBERT, B.S., M.S., PH.D.
Assistant Professor of Anatomy
JAMES D BOSTON, B.S., M.A., PH.D.
Research Associate in Medicine
ELSIE W. HAU CHU, M.D.
Instructor in Pediatrics
PHILIP L. DELONG, A.B., M.D.
Instructor in Anesthesiology
RAY F. GARMAN, A.B., M.D.
Assistant in Medicine
CARL DAVID HERMAN, A.B., M.D.
Associate in Clinical Psychiatry
FREDERICK A. HORNER, B.A., M.D.
Associate Professor of Neurology
STANLEY S. KLINE, A.B., M.S., M.D.
Instructor in Obstetrics and Gynecology
LYANA SHUSTER LAW, B.A., M.A.
Instructor in Otolaryngology (Audiology)
JOSEPH H. MAGEE, A.B., M.D.
Assistant Professor of Medicine
ARLENE P. MARTIN, A.B., M.N.S., PH.D.
Assistant Professor of Biochemistry and Assistant Professor of Radiology (Biochemistry)
JAMES MCGIVERN
Teaching Fellow in Anatomy
THOMAS F. NEALON, JR., B.S., M.D.
Professor of Surgery
HOWARD ELLIOTT REIDBORD, B.A., M.D.
Assistant Professor of Pathology
RONALD A. RESTIFO, A.B., M.D.
Associate in Medicine
NICOLETTE SOLARI, B.S., M.S.
Assistant in Pediatrics (Social Service)
RICHARD R. SORICELLI, B.S., M.D.
Instructor in Preventive Medicine
YOSHISATO TANAKA, M.D., D.SC.
Research Associate in Otolaryngology
MARIE L. BORBECK, B.S., M.S., PH.D.
Assistant Professor of Biochemistry
ROBERT B. WEIMANN, A.B., M.D.
Instructor in Surgery
JOE ED WHETSELL, M.D.
Associate in Medicine
LOUIS A. WILSON, B.A., M.S., M.D.
Associate in Ophthalmology
DONALD P. YADUSKY, B.S., M.D.
Assistant in Medicine
NICHOLAS T. ZERVAS, A.B., M.D.
Assistant Professor of Surgery (Neurosurgery)
SIGFRID ZITZLSPERGER, M.D.
Associate Professor of Anatomy

TRANSFER

JOSEPH W. SPELMAN, B.S., M.D.
from Visiting Professor of Medicine (Legal Medicine)
to Visiting Professor of Pathology

WITHDRAWAL

ROBERT W. SIMPSON, B.S., SC.M., PH.D.
Associate Professor of Microbiology
PADMANABHAN SIDDHARTH, M.B.B.S., M.S., PH.D.
Assistant Professor of Anatomy
VASANT G. YADAV, B.S., M.D.
Instructor in Pediatrics
BRUCE R. BATCHELOR, B.A., M.D.
Assistant in Medicine

class notes

1901

DR. RALPH C. WISE, 545 Stewart Lane, Mansfield, Ohio, was honored on his 92nd birthday by more than one hundred Rotary Club friends. He is one of the charter members of the Mansfield Rotary. Dr. Wise writes that he has not been feeling up to par this past year and has retired. He practiced for 65 years, 55 of them in Mansfield doing EENT. A newspaper article referred to Dr. Wise as the "Dean" of this specialty.

1904

DR. J. NORMAN WHITE, 839 Clay Ave., Scranton, Pa., was news in the SCRANTON TIMES recently with the dedication of the Dr. J. Norman White Infirmary at the YMCA Camp Spruks in Poyntelle, Pa. The award honoring Dr. White on the occasion reads: "A Steward of the Lord. A Servant of Man. A Benefactor of Youth." Dr. White has been a member of the association since 1930 and has served on the Board of Trustees since 1945. He has been cited by the community on numerous occasions: in 1954 by the Lackawanna County Medical Society for 50 years in medicine. A surgeon, Dr. White served Moses Taylor Hospital as Chief Surgeon and as a Director, and Community Medical Center West as Senior Surgeon for 25 years. He is a past President of the United Churches of Lackawanna County.

1911

DR. EDWIN C. BOYER, 244 Market St., Johnstown, Pa., has received the U. S. Presidential Selective Service Award for 25 years of faithful non-compensated service to the department. He is now semi-retired after practicing medicine and surgery in Johnstown for 56 years.

1919

DR. RALPH D. GREEN, 2712 S. Norton, Sioux Falls, S. D., reports that he is in full retirement.

1923

DR. ERNEST L. NOONE, Furnace Lane, Elverson, R. D. #1, Pa., was compiler and author of the 1923 *Class Record* which came out at reunion time. The *Record* provided complete data on 62% of the 75 names on the class list—an 83% response. Dr. Noone retired in 1966, having devised in his career a Hospital Disaster Plan and a County C. D. Medical Organization which received wide acceptance. He also has been active in medical disaster at the state level.

class notes

1931

DR. W. JOSEPH MCMARTIN, 407 S. 16th St., Omaha, Neb., has been kept busy (for the past 14 years) as Professor and Chairman of the Department of Urology at Creighton University School of Medicine. Previously he held the position of President of the American Urological Association. Dr. McMartin has two sons, one a graduate of MIT in electronics, the other a graduate of the University of Virginia Law School who is practicing in Denver, Colo.

1932

DR. MAURICE I. BAKUNIN, 105 Brooklawn Ave., Bridgeport, Conn., is semi-retired now.

DR. ALFRED S. MOSCARELLA, 23 Lawrence St., Spring Valley, N. Y., reports that his son, Dr. Alfred Moscarella, has his Boards in general surgery and is qualified for his Boards in thoracic surgery. He joined his father's practice in July.

DR. WALTER S. NEFF seems pleased with the home on a lake he has just built. Address: Box 175, Rt. 1, Spruce Haven, Britt, Minn.

1935

DR. SAMUEL R. BROWNSTEIN, 820 Franklin St., Santa Monica, Calif., recently

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notes on 1930

The Francis J. Braceland Building at the Institute of Living, Hartford, Connecticut, honors one of the prime movers in the growth of the Institute. Dedicated June 24, the Building is named for the Institute's former Psychiatrist-in-Chief of fourteen years. Dr. Braceland '33, is credited with policies which opened the Institute to a broader range of cases and income groups. A leader in American psychiatric thought, he is still a leader at the Institute of Living, presently as Senior Consultant and Chairman of Planning and Development. The development program which Dr. Braceland heads has passed the half way mark in its $10 million goal. The Braceland Building, the Institute's first new patient building, is part of this program. It houses a high school for adolescent patients, nursing and staff education facilities and four units accommodating 25 patients each. One of these units will handle psychiatric patients in need of medical treatment. The Building attempts to dispel an institutional feeling with vivid colors and wide corridors.

Dr. Braceland laid the cornerstone of the building named for him before a large audience, and, by the applause, a warm one.

Dr. Braceland at dedication

saw DR. JOSEPH RAYMOND '52, who is Director of Laboratories at UCLA, "where I also spent some time."

1936

DR. DAVID O. HELMS, 419 Main St., Hellertown, Pa., writes that his daughter received her Ph.D. degree in biochemistry from George Washington University in February. One son is a pilot with the Air Force, and another son enrolled at UCLA Medical School in September. "Ma and Pa living on beans and fat but educating young'uns. No grandchildren, one dog. Best regards."

DR. MICHAEL L. RACHUNIS, 5th & Riverside Aves., Roebling, N. J., limits his practice to a few hours a day and spends quite a bit of time enjoying his leisure. A large measure of excitement was added to his life recently when he received an invitation to visit Russia. Dr. Rachunis jumped at the chance and made the trip with 43 other doctors from the States, visiting hospitals and attending medical conferences in Moscow and Leningrad. He was most impressed with the medical care provided there, and with the cleanliness of the cities and friendliness of the people.

1937

DR. BERNARD B. ZAMOSTIEN, 4801 N. 9th St., Philadelphia, is President-Elect of the Pennsylvania Academy of General Practice. The group is composed of 1,500 physicians.

1938

DR. MARTIN COOPERMAN is Clinical Director of Austen Riggs Center in Stockbridge, Mass. In this newly created position he will supervise all clinical activity at Riggs. He plans to engage in research and psychiatric education as well as continue as a psychotherapist. Dr. Cooperman retired from the Navy in 1958 with the rank of Captain. For the past ten years he has been Senior Clinical Administrator and Clinical Director at Chestnut Lodge Hospital in Rockville, Md. Dr. and Mrs. Riggs have two daughters and a son.

DR. DAVID ECKSTEIN, 725 Greenwood Ave., Trenton, N. J., has joined the medical staff of the Meadow Lakes Medical Center, a retirement community serving 400 residents. Dr. Eckstein has had a long time interest in geriatric care and metabolic disease. Recently Governor Richard Hughes of New Jersey appointed him to his advisory committee on the chronically ill and aging. Dr. Eckstein is a trustee of the Medical Society of New Jersey and is the Society's liaison representative with the Department of Health regarding the medicare law.

1939

DR. C. ROGER KURTZ, 9999 Old Georgetown Rd., Bethesda, Md., retired in September as President of the D. C. division of the American Cancer Society. He recently became a grandfather for the second time.

1943

DR. STANLEY C. CLADER, 825 Glenbrook Ave., Bryn Mawr, Pa., has been appointed Director of Obstetrics at Bryn Mawr Hospital. He has served as President of Staff there for the past two years and has been associated with the hospital since 1947.

DR. GERARD O. HELDEN, 15 Anderson St., Hackensack, N. J., has been selected as a Councilor of the Lahey Clinic Foundation Alumni Association. Dr. Helden will assist in the organization of former Lahey Clinic residents and fellows. He is Director of the Department of Internal Medicine at Hackensack Hospital.

DR. LOUIS H. PALMER, JR., Surgery Department, Bryn Mawr Hospital, Bryn Mawr, Pa., has been elected President of Staff there. He succeeds classmate DR. STANLEY C. CLADER in this position. Dr. Palmer has been on the Bryn Mawr staff since internship at that hospital.

1944J

DR. PAUL CULTER has accepted a position as Professor of Medicine and head of the section on general medicine at the University of Texas Medical School in San Antonio, Tex. Seven months prior to assuming his new post, he had returned from a two year civilian tour of duty in Afghanistan. While Professor of Medicine at the University of Kabul in Afghanistan, he undertook an intensive training program for Afghan doctors. His new affiliation is with a new medical school and hospital and he will have broad responsibilities.

DR. THOMAS M. SPROCH, 2935 Seminary Dr., R. D. #7, Greensburg, Pa., has become Board certified in radiology. He is associated with the Latrobe Area Hospital.

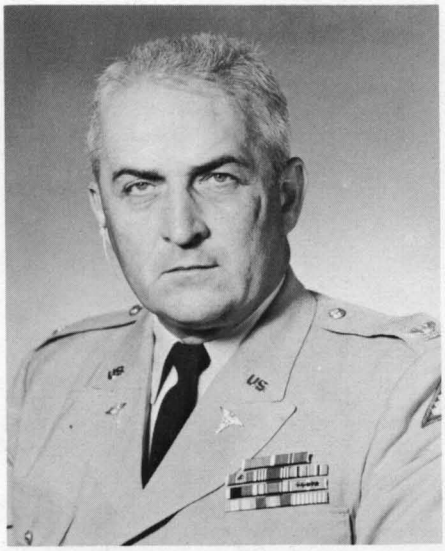
1944S

DR. CHARLES L. LIGGETT, 1015 Polly Ave., Baytown, Tex., stopped in the Alumni Office in August while visiting Philadelphia with his son, Charles, who is applying to Jeff for September 1969. Dr. Liggett goes an active pace, including in his career a term as Mayor of Baytown from 1963-1965. He is President of the Baytown Rotary and Chairman of the Planning Commission of the Houston and Harris County Highways, which adds up to a "Who's Who in Texas Today." For leisure there is the Goose Creek Country Club, where he is Chairman of the Golf Committee.

DR. THOMAS F. NEALON, JR., has accepted a position as Director of Surgery at St. Vincent's Hospital and Medical Center, Seventh Ave. and W. 11th St., New York City. St. Vincent's is a teaching hospital associated with New York University School of Medicine. He also will serve as Professor of Clinical Surgery at the University. At St. Vincent's Dr. Nealon will be working on new and expanded research. He is particularly interested in work on artificial livers and cardio-respiratory factors for patients desperately ill or under anesthesia. He also hopes to start a heart transplant program there.

Dr. Nealon previously had been Professor of Surgery at Jefferson, and a staff member since 1955. He is noted for his part in the development of the artificial liver and in inventing a process for extending the shelf life of collected blood.

DR. RICHARD H. ROSS, Col., MC, HQ. US Army General Hospital, Landstuhl, APO New York, took command of the Landstuhl Army Medical Center and the 2nd General Hospital on July 15. COL.



Dr. Ross

GEORGE F. RUMER '43, replaces Dr. Ross as Surgeon, Seventh US Army in Germany.

1945

DR. JOSEPH C. KOCH has been appointed Medical Director of U. S. Steel's Fairless (N. J.) works. Dr. Koch joined U. S. Steel in 1966 as a physician at the company's Gary, Ind., plant. Dr. and Mrs. Koch plan to move to the Bucks County, Pa., area.

DR. CHARLES W. WERLEY, 1235 Moffett Ave., Bethlehem, Pa., has been elected to the Board of Trustees of Moravian Seminary for Girls. Dr. Werley has a private practice in Bethlehem and is an associate radiologist at St. Luke's Hospital.

1946

DR. DAVID G. SIMONS, 11011 Hunters Park Dr., Houston, Tex., sent a brochure on the aerial sculpture being done by his wife, Vera Simons. Mrs. Simons is pioneering in this art which is derived from aerospace experience, and has solved several of its problems. Her work was on exhibit at the Contemporary Arts Museum in Houston last spring.

1947

DR. ROBERT F. BABSKIE, 246 E. Washington St., Nanticoke, Pa., has been appointed to the staff of Retreat State Hospital and will be in charge of the intensive care units there. Dr. Babskie recently completed three years of psychiatric training at Danville State Hospital and Eastern Pennsylvania Psychiatric Institute. He began general practice in Nanticoke in 1953 and became affiliated with Retreat as Acting Clinical Director until he left for psychiatric training.

DR. WILLIAM J. BROWNING, JR., 134 N. Centre St., Merchantville, N. J., has been elected President of the Camden County Heart Association. He is a staff member of Cooper Hospital and serves on the Board of Trustees of the New Jersey Heart Association. Dr. Browning is a member and former Chairman of the Pennsauken Township Board of Health.

1948

DR. RICHARD J. POTTER has been appointed by Governor Raymond Shafer as Deputy Secretary of the Pennsylvania Department of Health. Dr. Potter served with the Department from 1959 to 1965, before leaving to accept a position as Director of the Marquette County Health Department in Michigan. An editorial in a Pennsylvania newspaper called his record of achievement in the Northeastern Pennsylvania district "a small wonder," and saw his return as "good news for the Commonwealth."

DR. DANIEL S. ROWE, 20 Horseshoe Lane, Madison, Conn., an Assistant Professor of Pediatrics at Yale University, has received the 1968 Francis Gilman Blake Award. The citation is given by the senior class to an "outstanding teacher." The Blake Award was instituted in 1952 and provides medical students with an opportunity to recognize exceptional teaching talent. Dr. Rose joined the Yale faculty in 1966, after practicing in Philadelphia.

1949

DR. GEORGE R. FARRELL, 1300 Grand Ave., San Diego, Calif., sends some notes on his activities. "I'm still a busy general practitioner, but I'm gradually cutting down the amount of my practice as the years go by. For instance, I don't deliver babies any more; I do perform a fair amount of major surgery, since I've had a couple of years of surgical training." Dr. Farrell is President-Elect of the San Diego Chapter of the Academy of General Practice. As for leisure, he includes fishing on his cabin cruiser and riding a Harley Davidson motorcycle on weekends in this category. "My wife, Frances, is busy running apartments and the four kids are growing up quite rapidly, with the oldest, nineteen. I see BILL KUZMAN quite regularly, as well as JOHNNY MILLS, R. Z. HART and DON FREY. So we try to get together every now and then here in California to 'raise a few' for good old Jefferson."

DR. SIMON MARKIND, 505 Tearose Lane, Cherry Hill, N. J., in July became an Associate Professor in the Department of Physical Medicine and Rehabilitation at Temple University Medical School.

DR. HENRY J. TEUFEN, 732 Mott St., San Fernando, Calif., wrote in June that he and Mrs. Teufen were expecting the first offspring in July.

1950

DR. ALBERT J. GRANT, 5008 College Ave., Hannibal, Mo., recently spent two months in South Vietnam, working at civilian hospitals in rural areas with the American Medical Association Volunteer Physicians for Vietnam. He is a surgeon in private practice. Dr. and Mrs. Grant have seven children, aged 10 to 19 years.

DR. WILLIAM J. JACOBY, JR., has been promoted to the rank of Captain in the Medical Corps of the U. S. Navy. He is Chief of Medicine at the Naval Hospital in Great Lakes, Ill. Dr. Jacoby's primary interest is in the cardiovascular field, in which he has published numerous articles.

1951

DR. LEONARD S. GIRSH, Beury Bldg., 3701 N. Broad St., Phila., was installed as President and Chairman of the Board of Regents of the Pennsylvania Allergy Association recently. He is Assistant Professor of Internal Medicine-Allergy at Temple University Medical Center and Director of the Allergy Department at St. Christopher's Hospital, Phila.

DR. HARRY A. KAPLAN, 1501 Paper Mill Rd., Philadelphia, Pa., is in general practice and on the staff at Chestnut Hill Hospital. The young Kaplans number four.

DR. ROBERT A. MCKINLEY has been appointed to head a new state psychiatric hospital to be built in Elmira, N. Y. Dr. McKinley left White Plains, N. Y., where he had resided for thirteen years, to accept the new position. Dr. McKinley says he is looking forward to helping plan a hospital from the ground up. The new hospital will have facilities for 300 patients and provide complete care for all age groups.

1952

DR. ALVIN MERKIN, 1108 Rock Creek Dr., Wyncote, Pa., is President of the Medical Staff of John F. Kennedy Hospital in Philadelphia.

DR. ROBERT M. ZWEIG, 2936 McAllister St., Riverside, Calif., has been elected President of the Arlington Chamber of Commerce.

1953

DR. JOHN H. HARRIS, JR., 224 Parker St., Carlisle, Pa., has been named to the faculty of the Pennsylvania State University College of Medicine at the Milton S. Hershey Medical Center.

DR. CHARLES G. HEIL, JR., Benson East, Suite 207-A, Jenkintown, Pa., has an obgyn practice there and another in Willow Grove, Pa. "Have seven children, three boys, four girls."

DR. STANLEY S. STAUFFER, R. D. #1, Box 322, Macungie, Pa., has been appointed Chief of the Department of Anesthesia at St. Luke's Hospital. Dr. Stauffer has been at St. Luke's for the past four years. He has offices in Bethlehem, Pa.

DR. ORLANDO P. TEDESCO, 400 Paxson Hollow Rd., Media, Pa., is still practicing in Media. "Family remains at seven (five boys, two girls)."

DR. JAMES H. THOMAS, Eastwood Professional Center, Greensburg, Pa., is in general practice and father of five children.

1954

DR. CHARLES T. B. COYNE, 725 Butler Pike, Ambler, Pa., who has been with Merck Sharp and Dohme since 1964 as Manager of Professional Relations and Associate Director of Professional Education, has been appointed Director of Professional Training.

DR. EARL T. LEWIS has been named Associate Director-Medical Communication, at Wyeth Laboratories. This is a newly created position on the medical staff of the pharmaceutical company, located in Radnor, Pa. Dr. Lewis will be concerned with product labeling, advertising and promotional materials, and correspondence with the medical profes-

Dr. Lewis

sion in his new capacity. He joined Wyeth in 1965 with a background in internal medicine and clinical research.

DR. JOHN M. WAPNER, 202 N. 17th St., Allentown, Pa., is Director of Ophthalmology at Sacred Heart Hospital in Allentown and was made a Fellow of the American College of Surgeons last year.

1955

DR. ROGER C. LAAUWE, 930 Berdan Ave., Wayne, N. J., has been elected Secretary of the Staff of Paterson General Hospital. He began ophthalmology practice in Wayne in 1961.

DR. WILLIAM A. MILLHON, 2674 Haverford Rd., Columbus, Ohio, has been selected as a Councilor of the Lahey Clinic Foundation Alumni Association. Councilors from throughout the U.S. and abroad are assisting in the original organizing of former Lahey Clinic residents and fellows. Dr. Millhon is Clinical Instructor in Medicine at the Ohio State University Medical College.

DR. ROBERT PATHROFF, 457 Easton Rd., Horsham, Pa., is "enjoying a general practice in partnership and spending more time with my wife and three children. Met classmate TED SCHWARTZ skiing in the Poconos last winter."

DR. THOMAS B. TEMPLETON, 110-C Stockton St., Statesville, N. C., has been elected a Fellow of the American College of Physicians. He began practice in Statesville in 1961 and is an Instructor in Clinical Internal Medicine at Bowman Gray School of Medicine.

1956

DR. J. MOSTYN DAVIS, 301 E. Sunbury St., Shamokin, Pa., was elected Medical Director for the American Cancer Society, Pennsylvania Division District 4. He will serve a two year term. Dr. Davis has a private practice in Shamokin.

DR. REX W. GREEN, 247 N. 13th St., Allentown, Pa., has been appointed Medical Director for Mack Trucks, Inc. The position includes responsibility for coordinating medical services and activities in various departments and developing industrial medical management techniques. He has served the Allentown plant as physician for the past five years, and also maintains a private practice in that city.

DR. ROBERT C. MAGLEY, 729 W. Highland Ave., Ebensburg, Pa., currently serves as President of the Pennsylvania Highlands Heart Association. He is practicing general medicine and is on the staff of Miner's Hospital. He and his wife are parents of four.

DR. HENRY H. L. YIM, 45-939 Kamehameha Hwy., Kaneohe, Oahu, Hi., is doing well in pediatrics practice and welcomes any visitors to Hawaii.

1957

DR. HERBERT G. AARONSON, 7756 Green Valley Rd., Wyncote, Pa., is still in private psychiatry practice in Wyncote, having passed his Boards in 1966. He is also on the staff at Abington Memorial Hospital and a Consultant to Norristown State Hospital.

"Family now consists of my wife, Harriet, and four children, youngest just over one."

DR. THOMAS C. CORSON, III, 95 Friar Lane, Bloomsburg, Pa., has been certified by the American Board of Obstetrics and Gynecology and is presently Chief of the Department of Obstetrics at Bloomsburg Hospital.

DR. JOHN T. DOOLEY has left Salem, N.J., after nine years of general practice there. His new residence is Washington, Pa., where he engages in group practice as one of six general practitioners. A total of fifty physicians compose the group.

DR. ROBERT J. POSATKO, 558 Gates St., Philadelphia, after seven years in the Navy is practicing ob-gyn in Roxborough, Pa.

1958

DR. CHRISTOPHER J. BEETEL, 667 Chambers St., Trenton, N. J., is now certified by the American Board of Surgery, having successfully completed the Part II exam in February '68.

DR. NORMAN A. FOGEL, 995 N. Miami Beach Blvd., North Miami Beach, Fla., is "enjoying dermatologic life in Florida. Being President of Jefferson Alumni Association Florida Chapter has been interesting."

DR. JAY M. HUGHES, 56 Haynes St., Manchester, Conn., is in internal medicine practice in Manchester.

1959

DR. JOSEPH BAKA, 6494 Fairweather Dr., Middleburg Heights, Ohio, is practicing orthopedic surgery in Parma, a suburb of Cleveland. The three Baka children are ages three to eight.

DR. SAMUEL J. BARR recently located a classmate through class notes and sent along these about himself: "Just marked five years of practice in Titusville, Fla. (1001 N. Washington Ave.), and having passed my Boards in OBG last year, am now Chief of Obstetrics and Gynecology at the Jess Parrish Hospital. My wife, Linda, and I now have two girls and a boy. Three new Jeff arrivals in our town: PAUL HILL '63, who is joining my practice, CHARLIE BALAICUIS '60, in psychiatry, and WALT CERRATO '61, in general surgery."

DR. JOHN J. COUGHLIN, 4029 Timberland Dr., Portsmouth, Va., is in the Navy on the obstetrics and gynecology staff of the Naval Hospital in Portsmouth. He was Board certified in ob-gyn last year.

DR. JACK LUBIN, Mt. Sinai Hospital of Greater Miami, 4300 Alton Rd., Miami Beach, Fla., writes: "After finishing my residency in pathology at Pennsylvania Hospital, I took a position as associate pathologist at the Mt. Sinai Hospital in Miami Beach. My wife, Marilyn, and I, with our four children look forward to all the wonderful activities that Miami Beach offers."

DR. JAMES L. MCCABE, JR., 430 Owens Rd., Wynnewood, Pa., is a Councilor of the Lahey Clinic Foundation Alumni Association. In this capacity he assists in the original organizing of former Lahey Clinic residents and fellows. Dr. McCabe did part of his residency at Lahey as well as at Jefferson and Fitzgerald-Mercy Hospitals.

DR. HERBERT G. MAGENHEIM, 210 Wm. Howard Taft Rd., Cincinnati, Ohio, is now Board certified in internal medicine and in full-time practice in Cincinnati. The Magenheims are parents of three boys.

DR. WALTER M. SHELLY, 66 Av. Coloniale, Watermail, Brussels, Belgium, is presently at the above address with his family taking language training for service in Africa. The Shelly family is heading for the Congo to spend four years as medical missionaries for the General Conference Mennonite Church. Chief duties for Dr. Shelly and his wife, Dr. Elizabeth Shelly, will be training nurses and other medical personnel. They will be stationed in Kimpese. The family has been in the Congo before, serving there from 1961 to 1963 in a government and a mission hospital. The four Shelly children, aged from one to eight years old, are said to be very much looking forward to the adventure.

1960

DR. RUDOLF W. BEE has opened an office for ophthalmology practice at 2727 West Chester Pike, Marple, Pa.

DR. JOHN J. COYLE, 510 Traders Bank Bldg., Hazleton, Pa., recently passed the American Board of Ophthalmology examination and also has been elected to fellowship in the American Academy of Ophthalmology and Otolaryngology. "Am presently in the private practice of ophthalmology in Hazleton."

DR. CHARLES R. DRUFFNER, 312 Stone Ave., Clarks Summit, Pa., has been certified by the American Board of Internal Medicine. He practices with two associates.

DR. HERBERT M. EPSTEIN, R. D. #2, Hainesport & Lumberton Rd., Mount Holly, N. J., completed a surgical residency at Hahnemann in June 1967 and now has a general surgery practice in Mount Holly.

DR. JOSEPH M. GAGLIARDI, JR., Forest Glen Dr., Woodbridge, Conn., says, "Both practice and Yale affiliation going well." Dr. Gagliardi took Part II of the orthopedic Boards in February.

DR. DAVID GREEN, 827 N. Belleforte Ave., Oak Park, Ill., is a full-time staff hematologist at Cook County Hospital and an Associate in Medicine at Northwestern University.

DR. ROBERT A. HARTLEY, 1020 Adcock Rd., Lutherville, Md., spent last year as a clinical fellow in gastroenterology at Johns Hopkins Medical School. He is still on active duty with the Public Health Service with the rank of Senior Surgeon.

DR. JOHN M. HESS, 536 Spruce St., Riverside, Calif., recently wrote from his new station, March Air Force Base Hospital in Riverside. "Just completed a tour of duty at the 12th USAF Hos-

pital in Vietnam. We're enjoying sunny California very much."

DR. CHARLES T. KELSO, Mercy Hospital, 1520 Fifth St., Muskegon, Mich., passed the anatomic and clinical pathology Boards last November. "Enjoying very much living right on the shore of Lake Michigan."

DR. HARVEY W. OSHRIN, 30545 Palo Alto Dr., Redlands, Calif., has completed his three years of psychiatric residency training and decided to remain as a staff psychiatrist at Patton State Hospital. He is also psychiatric consultant for the Student Health Center of the University of California, Riverside, and serves in the same capacity for the Department of Welfare in San Bernardino and Riverside Counties.

1961

DR. WALTER A. CERRATO, 4102 Wyoming Ave., Tampa, Fla., at last writing planned to open a practice in Florida on completion of Air Force duty in July 1968.

DR. KARL R. HERWIG, USN Hospital, Bethesda, Md., is a Lieutenant Commander in the Navy. "Have joined the Jefferson group at Bethesda as a staff urologist. ELLIOT PERLIN, JERRY POLIN, DON ROEDER, and JIM SNYDER are here also. If anyone comes to D.C. to testify or demonstrate, drop in."

DR. JOHN P. KEEFE has opened an office for ob-gyn practice with two associates, Suite 304, Carnegie Medical Bldg., 10515 Carnegie Ave., Cleveland, Ohio.

DR. RONALD J. LENTZ, 323 N. George St., Millersville, Pa., writes: "Have started general practice in Millersville after five years as a flight surgeon in the U. S. Navy and a G.P. residency at Lancaster General Hospital. Family includes wife, Florence, and three children."

DR. JOHN P. LESNIAK, 311 Stone Ave., Clarks Summit, Pa., is a psychiatric resident at Binghamton State Hospital in Binghamton, N. Y. The hospital is an affiliate of the Upstate Medical Center at Syracuse, N. Y.

DR. THOMAS C. REEF just completed two years in the Air Force at Chanute AFB

reunion chairmen 1969

Fiftieth—1919
MILTON B. EMANUEL, M.D.
625 Vine St.
Philadelphia, Pa.

Forty-Fifth—1924
ROBERT K. Y. DUSINBERRE, M.D.
R.D. #1 Box 52
Wellsboro, Pa.

Fortieth—1929
ALFRED E. TRONCELLITI, M.D.
1522 Wynnewood Rd.
Wynnewood, Pa.

Thirty-Fifth—1934
JOE H. COLEY, M.D.
401 N.W. 14th St.
Oklahoma City, Okla.
MICHAEL VACCARO, M.D.
251 DeKalb Pike
King of Prussia, Pa.

Thirtieth—1939
JOSEPH P. LONG, M.D.
1930 Chestnut Street
Philadelphia, Pa.

Twenty-Fifth—1944J
BURTON L. WELLENBACH, M.D.
1930 Chestnut St.
Philadelphia, Pa.

Twenty-Fifth—1944S
JOHN J. GARTLAND, M.D.
275 South 19th St.
Philadelphia, Pa.

Twentieth—1949
GERARD M. SHANNON, M.D.
8118 Bustleton Ave.
Philadelphia, Pa.

Fifteenth—1954
JOHN R. PATTERSON, M.D.
16 North Concord Ave.
Drexel Hill, Pa.

Tenth—1959
FRANCIS G. KUTNEY, M.D.
4201 Edgmont Ave.
Brookhaven, Pa.
LAWRENCE J. MELLON, M.D.
Fairview Rd. and 5th Ave.
Woodlyn, Pa.

Fifth—1964
MILTON J. SANDS, JR.
522 S. Juniper St.
Philadelphia, Pa.

and is now at Roosevelt Hospital, Ninth Ave. and W. 59th St., in New York City. He has a fellowship in hand surgery and is studying with Dr. William Littler there. Daughters Karen and Laura are now 8 and 6.

DR. EUGENE SHUSTER, 333 W. Abbottsford Rd., Philadelphia, has been promoted to the rank of Assistant Professor of Obstetrics and Gynecology at Temple University. He recently was certified by the American Board of Obstetrics and Gynecology.

DR. DAVID K. SUBIN is back from a year in Guam and is now doing a year of specialty training in hand surgery at Grace Hospital in Detroit, Mich. Following this, he plans to return to Jefferson for a five year residency in orthopedic surgery.

1962

DR. THOMAS J. DOORLY, 645 Glendale St., Carlisle, Pa., is now associated with the Carlisle Pediatric Center. Dr. Doorly served two years with the Army Medical Corps and spent three years training at Children's Hospital in Washington, D. C. During his last year he was Chief Resident. Dr. and Mrs. Doorly are parents of a seven year old son.

DR. JERRY GOOSENBERG planned to begin a private ob-gyn practice in association with two other men, in Canoga Park, Calif., on separation from the service last July.

DR. STEPHEN GOSIN, 3305 Retlaw Rd., Baltimore, Md., spent six weeks on a weather patrol to Ocean Station Bravo, North Atlantic Ocean, with the U. S. Coast Guard cutter CASTLE ROCK. He has now resumed duties as Assistant Chief of Surgery at the Public Health Service Hospital in Baltimore.

DR. LOUIS E. LEVINSON, 919 Elkhorn Rd., San Antonio, Tex., is entering his last year of residency in ob-gyn at Brooke Army Hospital and was recently promoted to the rank of major. Daughters, Tracy and Dara, are ages 7 and 3. "If any classmates or friends are passing through San Antonio, look me up."

DR. STANLEY F. PETERS, King Rd., R. D. #1, Chalfont, Pa., writes: "Adopted two children, Jan, age 2, and Kevin, age 3,

making a total of five children, ages 6, 5, 3, 2 and 2."

DR. FRANK M. QUINN left Walter Reed in July to become Chief of Ophthalmology at the 2nd General Hospital in Landstuhl, Germany. Address: Box 27, 2nd Gen. Hosp., APO N. Y., 09180.

DR. JULIA S. RICHTER, 301 E. Ward St., Hightstown, N. J., has become associated with three partners in an internal medicine practice. He recently competed a fellowship in hematology and oncology at Temple University Health Science Center.

DR. DAVID E. ROSENTHAL recently finished his two-year tour with the USAF at Travis AFB. He is now affiliated with The Permanente Medical Group, 1105 Veterans Blvd., Redwood City, Calif., as clinical cardiologist and Chief of the Coronary Care Unit. "Our third son, Steven Jay, was born in March. My wife, Sandy, and I are wild about California, and are looking forward to our new home here."

DR. A. CARL SEGAL, 616 Bjornstad St., Ft. Benning, Ga., has finished a psychiatric residency at Walter Reed and post-residency training in community psychiatry at Harvard's Laboratory of Community Psychiatry (under Dr. Gerald Caplan). "Tremendous experience." Dr. Segal has completed his first year as Chief of Psychiatry and the Mental Hygiene Clinic at Fort Benning, attempting to develop a comprehensive, community-based mental health program. "Frustrating, exciting, and great fun."

DR. JOSEPH W. SOKOLOWSKI, JR., in May began a fellowship in pulmonary disease at the U. S. Naval Hospital, St. Albans, N. Y.

DR. ALBERT TAWIL, 2127 W. Buffalo Ave., Tampa, Fla., is in general practice in Tampa, "enjoying my practice and the climate here. We have two children. Would welcome a call or visit from any Jeff alumni traveling this way."

DR. JOHN W. TOMLINSON has opened an office for the practice of ophthalmology at the Everett Eye Clinic, 1515 Pacific Ave., Everett, Wash. For the past two years he has been on active duty with the Naval Reserves, spending one year in Vietnam. He served aboard the hospital ship, USS REPOSE, as eye surgeon and established the "Vision for Vietnam" program for native civilians.

DR. WILLIS W. WILLARD III, has given up his practice in Williamsport, Pa., to accept a position on the staff of the Milton S. Hershey Medical Center of the Pennsylvania State University. He will serve as an instructor in the Department of Family and Community Medicine and have a private practice in the Hershey area. The Hershey school has a unique program of assigning a family of patients to each student to follow during his four years. Dr. Willard joins three other faculty members in the department. New address: 13 Granada, Briarcrest Gardens, Hershey, Pa.

Dr. Willard

1963

DR. ROBERT M. DAVIS, Apt. B-11, Country Club Manor, York, Pa., has been in New York since medical school, becoming Chief Resident in general surgery. He plans to resume residency training in plastic surgery. The present: two years in the Navy which began in July.

DR. ROBERT D. DEITZ, 10118 Chickadee Lane, Adelphia, Md., is in private internal medicine and cardiology practice in Maryland.

DR. RICHARD I. FEINBERG, 418 S. Palm Dr., Beverly Hills, Calif., became a member of the California Bar and is practicing law in Los Angeles "with two other doctor-lawyers." He also is on the faculty of the University of Southern California Law School and teaches a postgraduate course in legal medicine.

DR. FRANCIS T. FITZPATRICK, 3600 School House Lane, Philadelphia, finished a residency at Children's Hospital of Philadelphia in June. At that time he planned to enter pediatrics practice in Willingboro, N. J., with DR. CYRUS G. HOUSER '64.

DR. SANTO LONGO has joined the medical staff at Geisinger Medical Center, Danville, Pa., as an associate in the Department of Pathology. He recently completed a residency in clinical and anatomical pathology at the Pennsylvania Hospital.

DR. MURRAY H. MOLIKEN, 900 Abington Rd., Cherry Hill, N. J., opened a new office in January of this year. The Molikens' second child was born last November.

DR. JAMES PRICE, 233 Wilson St., Albany, Calif., is a research fellow, Donner Laboratory, University of California at Berkeley.

DR. IRV P. RATNER lists his new address as Manchester Apts., G-202, 2700 Boulevard Rd., Wilmington, Del., and reports a daughter, Melissa Beth, born in December 1967.

DR. B. HOAGLAND ROSANIA, 521 Larix Rd., Monroeville, Pa., has finished his tour as a Navy flight surgeon and is now at the University of Pittsburgh in orthopedic surgery for four years. "Have seen RANDY MARLIER, who is in his last year of neurosurgical residency." The Rosanias have two children.

DR. MELVIN YUDIS, 43-32 Kissena Blvd., Apt. A-5, Flushing, N.Y., is now serving at the U. S. Naval Hospital, St. Albans, N.Y., in their Department of Medicine and is Head of the Renology Section.

1964

DR. JAMES C. BARTON, 359 Lortz Ave., Chambersburg, Pa., writes in: "I am busily engrossed in private general and family practice in Chambersburg and am associated with two fine physicians, both from 'a western Pennsylvania medical school.' (Sorry about that)." The latest addition to the Barton family brings it up to four.

DR. JOEL S. BAYER, 3411 Wayne Ave., Bronx, N.Y., finished Navy duty in June and is back at Montefiore Hospital in New York completing his surgical residency.

DR. RONALD H. COHEN, 102 Chanute Rd., Goldsboro, N.C., is in the Air Force, stationed at Seymour Johnson Air Force Base.

DR. PETER J. EIDENBERG, P.O. Box 225, Fairview, Ore., was discharged from the Air Force a year ago and is now in general practice with an associate near Portland, Ore.

DR. JAMES S. GRIM, 4800 Leslie Dr., Del City, Okla., entered the Air Force in July. The Grims were expecting their fifth child at last writing.

DR. JOHN P. HEILMAN, JR., has been selected for specialty training in aerospace medicine. He is presently at Brooks AFB, San Antonio, Tex., where he is doing a three year residency. He recently received a master of public health degree at Johns Hopkins University.

DR. HERMAN R. ISAACS, 5421 Kenwood Rd., Apt. 402, Cincinnati, Ohio, is a resident in urology at the University of Cincinnati Medical Center.

DR. CHARLES R. KELLEY, 1929 N. Senate Ave., Apt. 33, Indianapolis, Ind., is at the Indiana University Medical Center doing an internal medicine residency.

DR. GILLES A. MARCHAND, 46 Fair Harbor Pl., New London, Conn., is in the final year of his ob-gyn residency at Laurence Memorial Hospital in New London. "My family and I plan on settling in this area."

DR. ELI O. MELTZER is in the second year of a pediatric allergy fellowship at the University of Colorado Medical Center and the National Jewish Hospital, 3800 Colfax St., Denver, Colo.

DR. DONALD SAFIR, Jenkintown and Edgehill Rds., Ardsley, Pa., is in solo general practice in the Philadelphia suburbs, and is father of two daughters.

DR. RICHARD D. SHAPIRO is recipient of a fellowship to study retinal diseases and retinal detachments at Ohio State University, Columbus, Ohio, until January. He then plans to enter private practice in ophthalmology in Princeton, New Jersey.

DR. ELLIOTT M. STEIN, 1249 Park Ave., New York, N.Y., has completed his tour of duty in the Public Health Service. "Returning to internal medicine residency at Mt. Sinai Hospital in New York City."

DR. CHARLES O. THOMPSON, Box 428, Somerset, Pa., now has a general practice with an associate in Somerset.

DR. SAMUEL G. WATTERSON, 1405 Vernon Rd., Philadelphia, has been appointed to the associate medical and dental staff of Somerset Community Hospital. He completed duty with the Navy in July.

1965

DR. MARTIN R. BRADLEY, 2341 Pennsylvania Ave., Philadelphia, in August returned from a two months assignment to South Vietnam. Dr. Bradley gave voluntary service in a provincial hospital under a program administered by the American Medical Association and the U. S. Agency for International Development. Physicians in the program emphasize treatment of civilian Vietnamese patients. At home Dr. Bradley is Director of Emergency Service at Episcopal Hospital and is also an instructor at the Community College of Philadelphia. Dr. Bradley and his wife, also a physician, became parents of a boy, Timothy, in July.

DR. JAMES R. DINGFELDER began an ob-gyn residency at Western Reserve University, Cleveland, Ohio, in October. Two sons in the family.

DR. ALBERT A. DUBIN, 157 Sycamore Ave., Mill Valley, Calif., is taking a medical residency at Kern County Hospital. Daughter Lisa is over a year.

DR. JAY M. GRODIN, 6471 Merry Meadow, Dallas, Tex., has a fellowship in ob-gyn endocrinology at the University of Texas, Southwestern, Medical School.

DR. NATHAN B. HIRSCH, Hopkinson House, Washington Square South, Philadelphia, is a second year resident in obstetrics and gynecology at Pennsylvania Hospital. "I will be a guest of Uncle Sam, probably in Southeast Asia, beginning June 1969."

DR. BRUCE J. LANARD, 100-F Richmond Rd., China Lake, Calif., was serving as a flight surgeon in the Navy at China Lake at his last writing, and "still single."

DR. RAPHAEL K. LEVINE, 137-20 228th St., Laurelton, N.Y., is on the staff of the Naval Hospital in St. Albans, N.Y. Son, Solomon, is over two now.

DR. ROBERT E. LONGNECKER as of July 1, 1968 began an NIH renal metabolic fellowship at Yale - New Haven Community Hospital, New Haven, Conn., under Dr. Franklin Epstein.

DR. ANTONIO RAMOS-UMPIERRE, Asia St., 1502, Santurce, P.R,. is an ophthalmology resident at the University of Puerto Rico.

DR. HARVEY SLATER, 1117 Downlook St., Pittsburgh, Pa., planned to start a surgical residency at Western Pennsylvania Hospital in Pittsburgh at his last writing (from Vietnam).

DR. J. DENNIS STEEN, 5710 San Juan Ave., Apt. 31, Jacksonville, Fla., a Navy flight surgeon, wrote that he expected to be aboard the aircraft carrier U.S.S. INDEPENDENCE for a nine months Mediterranean cruise beginning May 1, 1968.

1966

DR. JAMES F. BRODEY, 84 McDermott Circle, Mt. Carmel, Conn., is a psychiatry resident at Yale University. Also: father of a year old daughter.

Notice was received from the Department of Health, Education and Wel-

fare, Public Health Service, during July that DR. STEVEN A. FRIEDMAN, DR. SHERMAN S. PAZNER and DR. DAVID W. VASTINE have joined the staff of that Department. Dr. Friedman is in Houston, Tex., Dr. Pazner in New York City, and Dr. Vastine, in Atlanta, Ga.

DR. BARTON L. HODES, 2727 Girard Ave., Evanston, Ill., is in an ophthalmology residency at Evanston Hospital and has a full three year Berry deferment.

DR. W. ROYCE HODGES III, USAF Hospital, USAFE, Box 631, APO NY, is stationed at Weisbaden, Germany, as a general medical officer working in the emergency room.

DR. BURTON MASS is a Berry Plan participant taking a residency in internal medicine at Albert Einstein Medical Center, York and Tabor Rds., Philadelphia.

DR. WAYNE J. MATZELLE, 7801 Bissonnet #44, Houston, Tex., was married in October 1967, and presently is doing a surgical residency at Hermann Hospital, Texas Medical Center, Houston.

DR. THOMAS B. MOLL, c/o 308 Greenwood St., Hamburg, Pa., is currently stationed with the Army at Chu Lai, South Vietnam, serving as a Preventive Medicine Officer until January 1969.

DR. RICHARD A. ULRICH, 6044th Disp., APO San Francisco, is enjoying himself "and learning a lot by running essentially a small general practice type program in a Class B USAF dispensary at Kimpo International Airport's doorstep—only a few miles from Seoul, Korea."

DR. CHARLES L. WOODRUFF, 435 E. 70th St., Apt. #16C, New York, N.Y., is enjoying a radiology residency at the New York Hospital Cornell Medical Center.

1967

DR. HARRY M. CLEMENTS has finished his internship at the Public Health Service Hospital in New Orleans and has been assigned to military duty as Medical Officer at the U. S. Coast Guard Training Center, Cape May, N. J.

DR. WILLIAM D. FERGUSON is doing a residency in psychiatry at the University of Washington Hospital, Seattle, Wash., having completed an internship at Allentown General Hospital, Allentown, Pa.

DR. RICHARD J. FLYNN writes that he began a neurology residency at Tuft's New England Medical Center in Boston last July, "courtesy of the Air Force and the Berry plan." Recently, Dr. Flynn was certified for general medicine practice.

DR. JAMES E. HINKLE, 907 Weldon Lane, Bryn Mawr, Pa., began an anesthesiology residency at the University of Pennsylvania in July.

DR. CHARLES H. KLIEMAN is a surgical resident at Maimonides Hospital, 4802 10th Ave., Brooklyn, N.Y.

DR. FRED H. MEYER completed internship at Mercy Hospital in Pittsburgh, Pa., and joined the Marines last July. Dr. and Mrs. Meyer are parents of three.

DR. DAVID H. MILLER, 6640 Sprague St., Philadelphia, with a three year deferment on the Berry Plan, is doing a residency in ophthalmology at Wills Eye Hospital in Philadelphia.

DR. STANTON I. MOLDOVAN, Clifton Square Apts. #70, 222 Senator Pl., Cincinnati, Ohio, began a psychiatry residency at the University of Cincinnati Hospital in July.

DR. LLOYD W. MOSELEY, JR., 1840 Wealthy St., Apt. #8, writes: "Plan to stay at Blodgett Memorial Hospital for a year in internal medicine before going to fly with the Air Force for two years."

DR. ANDREW J. PRYHARSKI, 1581 9th St., Cuyahoga Falls, Ohio, has started his residency at Children's Hospital, Akron, and reports that son Gregory is over a year now.

DR. WALTER J. REYNOLDS entered the Navy in July, a month after he became a father for the third time. Address: 282 Washington St., Hartford, Conn.

DR. LEONARD H. SELTZER began a pediatrics residency in July at Children's Memorial Hospital, Chicago, Ill.

DR. BARRY A. SILVER, 169 Boundry Ave., Staten Island, N.Y., was commissioned an officer in the Public Health Service last July.

DR. CARL L. STANITSKI, 3302 Glenway Dr., Kensington, Md., is now with the NIH in Bethesda, Md., as a staff associate in the Division of Arthritis and Metabolic Disease.

DR. VINCENT J. VARANO is taking a medical residency at the Mayo Clinic, Rochester, Minn.

nineteenth century sidelights

A thoughtful alumnus, Dr. William F. Pohl '23, of Meridan, Mississippi, clipped and sent to the Bulletin *the following story on Jefferson alumnus Louis Archer Boswell, class of 1855. It is reprinted through the courtesy of* The Birmingham News.

One hundred years ago, Dr. Louis Archer Boswell stood on the bank of the Yazoo River in Greenwood, Miss.

He gazed at an airplane model for a while, then picked up a tree branch and beat the model into pieces.

The parts were placed into a bag and tossed into the river. Many people thought the doctor was tired of being labeled "crazy."

Dr. Boswell believed that man could fly; not by sprouting wings, but in a machine with bird-shaped wings on the side and a third in the rear to take the place of a bird's tail.

After the river ceremony, Dr. Boswell moved to "Red Hill" plantation in Eastaboga which his wife had inherited from her mother.

He set up practice in Talladega and soon was labeled as "an odd sort of person," due to his outside interest of tinkering with strange mechanical equipment.

Dr. Boswell tended the sick, farmed, raised prize cattle and worked to develop an airplane, some 35 years before the famed Kittyhawk flight.

Anniston came within a hair's breath of becoming the site of the first airplane flight, for it was here that Dr. Boswell found a friend in the late J. A. Callahan, machinist, who operated a shop on East

14th Street. Callahan worked with the Doctor and helped construct an airplane from models that had been patented by Boswell in September of 1874.

His plane resembled gliders that were flown and experimented with by would-be aviators all over the country. All his model needed was a suitable engine.

Boswell contacted a Frenchman who had developed an engine thought suitable for his aircraft, but his limited funds prevented purchase.

The United States government refused the doctor's request for funds for the project, stating that similar experiments were already being financed. Boswell believed that only $1,000 stood between success of his project, but all in a position to offer assistance were skeptical and crossed the doctor off their list as an eccentric inventor.

A few letters, saved from a fire that destroyed most of his papers, indicate that Anniston police were afraid someone would be injured by Boswell's propeller on the plane and prevented it from being taken from Callahan's shop for a trial flight.

Accounts from old timers said they saw a trial flight and described the event.

"The plane never actually flew," they said. "It would travel across the field, blowing the tree branches and grass, until it hit a high spot, then bounce up about six feet into the air and come down some three hundred yards away."

Regardless of whether the plane flew, Dr. Boswell did make contributions to aviation development. He obtained patents on many inventions including a dirigible steering mechanism, the first wing stabilizers, and a patent for a propeller wheel 29 years before the Wright brothers made history.

At the time of Boswell's death, he was awaiting the outcome of a trial in process between the Wright brothers and a Frenchman, M. Paulman, who had come to the States with a workable airplane model. Boswell felt the brothers had used ideas similar to his, on which he held patents.

Whether or not Boswell's dreams would have come true is only speculation.

To add to the confusion and dismay of Boswell's relatives, the Talladega Airport was constructed on property where he once conducted his experiments.

engagements

1967

DR. HELEN JANE MIKULIAK to Lawrence D. Breck, Esq.

1968

DR. HAROLD A. YOCUM to Miss Christine Brodowski

DR. CHARLES J. ZWERLING to Miss Reva L. Peckman

weddings

1961

DR. ROBERT E. MCLAUGHLIN to Miss Julia F. Hogarty, July 20, 1968

1962

DR. ROBERT C. GILROY to Miss Letitia Anne Gaughan, June 8, 1968

1965

DR. NATHAN B. HIRSCH to Miss Christine Bosna, May 10, 1968

DR. SANFORD A. TISHERMAN to Miss Carolyn Spiegel

1967

DR. ROBERT GARY ALTSCHULER to Miss Michele Centrella

DR. GARY STEVEN GILGORE to Miss Mildred Ann Hoefel, June 24, 1968

1968

DR. CARL B. BINNS to Miss Deanna Jean Addis, June, 1968

DR. VIRGINIA J. CAMPBELL to Dr. Thomas J. Poirier, June 8, 1968

DR. CARL M. GREEN to Miss Jill Perlman

DR. JUDSON H. KIMMEL to Miss Deborah Jean Anderson, June 15, 1968

DR. LEO A. ROBERGE to Miss Linda Faith Ervin, June 8, 1968

DR. SARAH J. VON DER HEYDE to Timothy W. Richardson, June 8, 1968

DR. FRANK R. WALCHAK to Miss Carolyn E. Jones, June 8, 1968

births

1959

A son, Keith Adams, on September 19, 1968, to DR. and MRS. N. CRAIG BAUMM

1966

A daughter, Laura Susan, on July 20, 1968, to DR. and MRS. ARTHUR J. SCHATZ

1967

A daughter, Rebecca Elise, July 26, 1968, to DR. and MRS. STEPHEN PINSK

obituary

Frank M. Chesner, 1914

Died July 31, 1968 in Philadelphia. Dr. Chesner, a retired urologist, was a member of the faculty of Temple University Medical College for eighteen years. He also was associated with the Albert Einstein Medical Center's Southern Division and Pennsylvania Hospital. His wife, Eva, survives him.

Robert L. Ellis, 1914

Died June 26, 1968 in York, Pa. Dr. Ellis was a surgeon in York for over fifty years. In 1951 he was cited by the publication of the Institute for Research in Biography of New York City. The publication reported that he gave the first blood transfusion in York and did the first whole blood vein to vein transfusion in southern Pennsylvania. Dr. Ellis is a past President of the York County Medical Society. In addition to his wife, Mamie, he is survived by two daughters.

Michael Platt, 1917

Died August 24, 1968 in Philadelphia.

James Hawfield, 1918

Died June 26, 1968 in Washington, D. C. A general practitioner, Dr. Hawfield maintained his office in Washington. He was a member of many medical societies and was a past President of the University of North Carolina Alumni Association. He is survived by his wife, Anne, two sons, a daughter, and ten grandchildren.

Edward W. Beach, 1919

Died August 26, 1968 in Sacramento, Calif. Dr. Beach, a urologist, had practiced in Sacramento

since 1921 excluding several years for a residency at Johns Hopkins.

He is survived by his wife, Margaret, a son and three daughters.

Solomon L. Hermany, 1919

Died March 6, 1968 at Bowmanstown, Pa. He practiced medicine there for many years. Dr. Hermany was President of the Carbon County Medical Society, school physician for eight years and head of the local tuberculosis clinic. He is survived by his wife and two sons, one of whom is Dr. Paul Hermany, class of 1952, and six grandchildren.

John A. Daugherty, 1928

Died August 28, 1968 in Harrisburg, Pa. Dr. Daugherty was former Chief-of-Staff at Harrisburg Hospital, past President and Chairman of the Pennsylvania Blue Shield Board and past President of the Dauphin County Medical Society and the Harrisburg Academy of Medicine. Dr. Daugherty, a member of the Executive Committee of the Jefferson Alumni Association, was a Clinical Professor of Medicine at Hahnemann Medical College.

Surviving are three sons and eight grandchildren.

David A. Johnston, 1928

Died August 16, 1968 in Harrisburg, Pa. Dr. Johnston, a surgeon, was Chief-of-Staff at Harrisburg Hospital. He served as assistant surgeon at Hazleton State General Hospital from 1931 to 1938 and was surgeon for the Pennsylvania State Police for over twenty-five years. Surviving are his wife, Gertrude, four children and seven grandchildren.

Edward T. McNicholas, 1929

Died July 30, 1968 in Baltimore, Md. He was associated with the Bethlehem Steel Corporation at Sparrow Point near Baltimore for over sixteen years. Prior to this he had a general practice in Philadelphia.

Surviving are his wife, Florence, two sons, two daughters and twelve grandchildren.

Earl A. Daugherty, 1930

Died June 28, 1968 in Philadelphia. Dr. Daugherty, a cardiologist, had been associated with Lankenau Hospital in Philadelphia for over thirty-three years.

Surviving are his wife, Jessie Frailey, and a son.

Robert Megowan, 1932

Died September 4, 1968 in Philadelphia. Dr. Megowan, physician at the Philadelphia plant of Rohm and Haas Company, maintained a private surgical practice in Frankford. Surviving are his wife, Elizabeth, a daughter and three grandchildren.

Franklin C. Fetter, 1940

Died July 21, 1968 in Charleston, S.C. Dr. Fetter at the time of his death was serving as Dean of the South Carolina School of Medicine in Charleston. Prior to this appointment he was administrator of Albert Einstein Medical Center, Northern Division, (1951 to 1954), Medical Director of Philadelphia General Hospital, (1954 to 1958), and Director of Medical Education both at Presbyterian Hospital in Philadelphia and Inner Hospital in Wilmington, Del.

Surviving are his wife, Eleanor, and a son.

Patrick J. Costello, 1943

Died September 22, 1968 in Bryn Mawr, Pa. A dermatologist, Dr. Costello was a Fellow in dermatology at the Cleveland Clinic Foundation and a former Assistant in dermatology at Jefferson.

He is survived by his wife, Janet, and four sons.

Charles Miller, Jr., 1949

Died August 12, 1968 in Biloxi, Miss. Dr. Miller of Allentown, Pa., died while vacationing with his family in the Gulf of Mexico. He was Assistant Plant Surgeon of the medical division of the Bethlehem Steel Corporation, a post he assumed in 1963, and was on the staff at Sacred Heart and St. Luke Hospitals in Allentown. Dr. Miller is survived by his wife, Irene, three daughters and a son.

J. Rudolph Jaeger

Died August 15, 1968 at Jefferson. Dr. Jaeger, who had been associated with Jefferson since 1943, was Honorary Professor of Neurosurgery. He established and became Head of the Division of Neurological Surgery at Jefferson. A graduate of the University of Pennsylvania School of Medicine, he was a past President of the American College of Surgeons, the Medical Club of Philadelphia and the Philadelphia Neurological Society. In 1958 Dr. Jaegar received the Distinguished Citizen Award of Denver in Colorado. He was internationally known for innovation in the treatment of "tic douloureaux," a nervous condition.

Surviving are his wife, Mabel, a son and daughter.

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IRVIN M. GERSON, M.D., J'44
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GEORGE J. HAUPT, M.D., '48
JOHN H. HODGES, M.D., '39
EDMUND L. HOUSEL, M.D., '35
WILLIAM T. HUNT, JR., M.D., '27
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ROBERT G. JOHNSON, M.D., '49
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BALDWIN L. KEYES, M.D., '17
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JOHN A. KOLTES, JR., M.D., '47
WARREN R. LANG, M.D., '43
JAMES H LEE, JR., M.D., '45
WILLIAM T. LEMMON, M.D., '21
WILLIAM T. LEMMON, JR., M.D., '60
SIDNEY S. LERNER, M.D., '47
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